THE BUILDER

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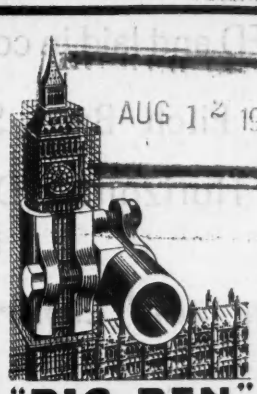

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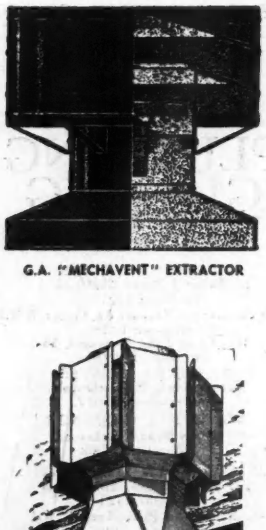

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"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

VOL. CLXVII JULY 7 1944 No. 5292

AUG 2 1944

THE FUTURE OF THE SQUARES

THE present deplorable condition of many of the squares from which the enclosing iron railings have been removed draws attention to the problem of what measures should be taken to restore these to a condition giving them their appropriate place among urban amenities. No uniform solution can be proposed as what would be desirable depends on a number of differing conditions; the first and most important consideration being the character and use of the surrounding buildings. In a few cases these present an opportunity for replanning and the best use of open spaces might well be to pool them with the building sites and provide their equivalent, or even more, in the type of open space meeting the requirements of those being accommodated in the new plan, but in general the squares and gardens will retain their present areas and positions.

The tendency to make these available to a wider public than has hitherto been customary is now an accepted principle and will fit in with the retention of open access to a large proportion, but such open access does not necessarily involve absence of enclosure; indeed, this has many disadvantages, not the least of them being an increased danger to children from passing traffic should they dash out from any point to retrieve an errant ball or for other reasons. In any case, as most of the squares are surrounded by roads open to traffic, the use of them as playgrounds should be under adequate control.

Another consideration is the obvious fact that large and well-grown trees form a striking feature in many instances and these prevent drastic changes of character that might otherwise be desirable, though they would not preclude a systematic layout of footways as possible short cuts on diagonal lines, in place of those winding ones so dear to the heart of the "landscapist" of the Victorian era; but here again the position of entrances should be carefully studied in relation to traffic conditions.

The presence of trees adds to the problems of the gardener in deciding what can be done in the provision of hedges and floral embellishments and he will also be faced with the economic factor determining the relative labour involved in the various types of layout. Experience of this will be in possession of the Parks departments of the Local Authorities, who are likely to have a larger proportion of the smaller open spaces in their hands in the future.

In making decisions as to what kind of treatment the squares should receive, the present use of the surrounding districts is the first consideration. In a number of cases, such as Bloomsbury, the large houses around are mostly occupied as business or professional offices, hotels or boarding-houses, and only a few permanent residents are left; further west flats are taking the place of independent homes, while in the south-west area the changes are still in progress. In all these cases the squares form a valuable feature where those from the surrounding buildings can take advantage of rest and a little exercise in the open air during their spare moments, and the treatment depends to some extent on the intensity of their use. Unobtrusive shelters should be provided and sometimes a café for light refreshments might be a desirable adjunct. A good provision of well-planned and well-drained paved area is suitable in our climate.

In other quarters, still mainly residential, the squares could provide for games both for adults and children, and in the case where houses are converted into—or replaced by—flats it would be an advantage if the roadway between these and the open spaces could be eliminated, on the lines of some of the communal gardens in the Ladbroke Grove district. The question as to the admission of the general public is best decided by the extent to which the specific areas can accommodate them; given an adequate provision of public open space, it may be convenient to limit the access to certain squares and gardens to those in proximity to them and still retain or provide an effective enclosure.

It yet remains to consider the architectural aspect of the future programme for the squares. This, as in other matters, must be based on social demands, but there may be alternative methods of fulfilling these. Starting from the traditional enclosure by vertical iron railings, these have a value in balancing the appearance of the similar railings guarding the areas of the surrounding houses. Nothing would be architecturally superior to the sweeping oval of the Bedford Square railings, and their retention has no connection with the question as to whether such a square should be open to the public or not. Most of the large squares should retain a clearly marked line of demarcation even if it were only a low curb with a well-clipped hedge behind it; the smaller ones could be paved with a formal pattern of enclosed flower beds, recessed seats and possibly a central monument or fountain. The plan should be related to the position of trees if these exist.

One may hesitate to include the provision of parking space for cars in the programme for squares, but this may perhaps be justified in a definitely business area, and there are cases in which a falling level offers the opportunity to provide both a covered car park and a terraced garden over it. We are only just beginning to appreciate the possibilities of the variation in level as affording most valuable assistance in re-organising our plans and only a few illustrations of this, such as the Birmingham Civic Centre, have yet appeared.

Some interesting examples of open squares are to be found in Continental towns and some valuable hints may be obtained from these, though it would be unwise to adopt such plans without modification as they meet conditions which, as a rule, differ widely from our own.

NOTES AND NEWS

Draft Statutory Planning Rules.

THE Ministry of Town and Country Planning has issued Draft Statutory Rules and Orders relating to Interim Development. A summary of the proposals will be found on page 11.

R.I.B.A. Examinations for P.o.W.

AT the R.I.B.A. Intermediate Examination for Prisoners of War, held at Stalag Luft 6, in the Spring of 1943, F./Sgt. Douglas Pearcy passed in the History of Architecture.

At the R.I.B.A. Final Examination for Prisoners of War, held at Oflag IX A/H, in the autumn of 1943, Captain R. G. Bateson passed in the subjects for which he sat as follows: B.1. General Construction. C. Hygiene (including drainage, ventilation, heating, lighting and water supply). D. Specifications and the properties and uses of building materials. F. Thesis.

Sheikh Abdul Hamid.

WE regret to record that Sheikh Abdul Hamid, an architectural assistant at the Ministry of Works, has died from enemy action in Southern England. The sheikh, who was keenly interested in architecture, gained his early experience in India, taking up the profession about 1920. In this country he was on the staff of Dr. H. V. Lanchester from about 1930 to 1937. On his own account he built a school in Jodhpur, and he prepared a design for the London Mosque which was not carried out.

A new organisation was recently founded by the sheikh under the title of the Society of Friends of the Islamic World, the main object being to encourage good relations and cultural contacts between the British and Islamic peoples. He will be buried at the Cardiff Mosque, which he opened recently for the benefit of the many Moslem seamen, past and present, at that port.

Three L.C.C. Housing Estates Proposed.

THE London County Council are to develop a site of 153 acres at Headstone-lane, Middlesex, by 102 flats and 1,168 houses, the latter being of a simliar type to the Chingford and Brooke estate, Kidbrooke, developments. The flats will be one-roomed, for aged persons. Garage accommodation is provided for about 32 per cent. of the larger-type houses. The tentative scheme of development also provides for the reservation of about 24 acres for schools and 5½ acres for churches, doctor's house, shops, etc. A large residence, "The Cedars," will be retained as a community centre. The density will be 9.89 houses to the acre after deducting the area set aside for schools. The estimated cost of the development, at 1939 prices, is approximately £775,000. The preparation of the necessary working drawings is in hand.

The Council has also acquired, at a cost of £434,000, two sites, at Thurrock and Chigwell, Essex, for development, by about 5,000 houses each, as cottage housing estates.

Retirement of Dumfries County Architect.

MR. JOHN R. HILL, for 25 years County Architect, first with Dumfriesshire Education Authority and then with Dumfriesshire County Council, has retired. Presentations have been made to him by his associates in the Building and Works Department, officials and friends in the Dumfries County Buildings, and the principal officers and deputies of Dumfriesshire County Council.

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From *The Builder* of 1844

Saturday, July 6, 1844. Price 3d.

A body of sappers and miners on Friday last commenced the erection of a scaffold upon Danbury church, for the purposes of the trigonometrical survey in progress throughout the county.

AMERICAN HOUSING IN WAR AND PEACE

AN EXHIBITION.

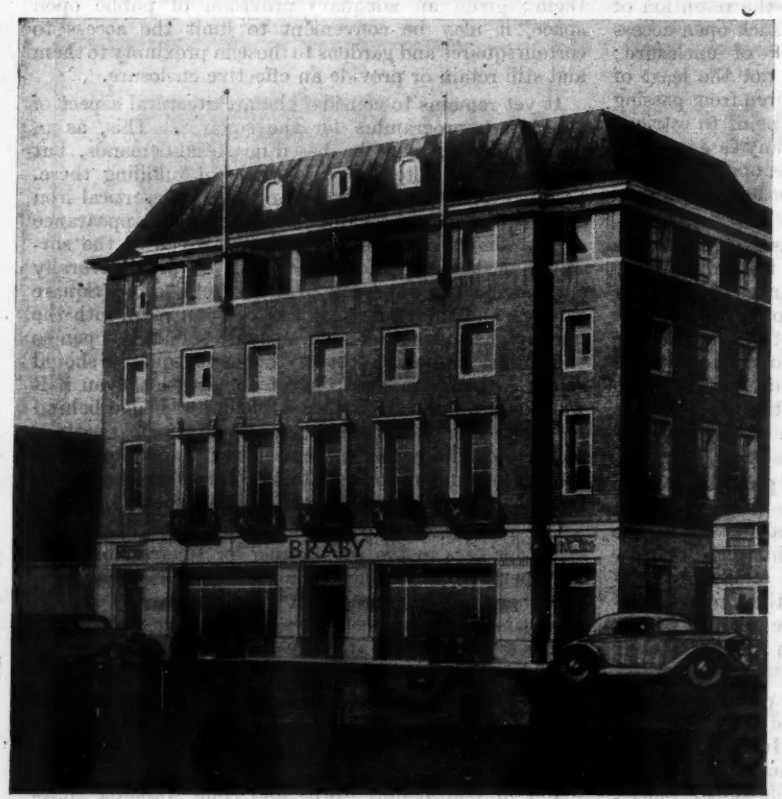
THE Royal Institute of British Architects announces an exhibition of American Housing in War and Peace, to be held at the Institute, 66, Portland-place, W.1, from July 19 to August 26. The exhibition, prepared by the Museum of Modern Art in New York, has been brought here by the U.S. Office of War Information at the request of the Council of the R.I.B.A. It is an exhibition of photographs telling the story of American housing before and during the war.

Because of her varied geographical and social conditions, America has experienced most of the housing problems we have met with here, and many others as well. It is of immediate practical interest to see how Americans have experimented to solve these problems.

The exhibition shows by photographs, diagrams and text, the work of the U.S. Government Housing Agencies and private organisations in the various fields of housing in cities and in rural areas. It demonstrates the high quality of the dwellings erected, the new materials and new methods of construction that have been used in war-time building. Many of the solutions and experiments are relevant to the British post-war problem of providing housing for temporary occupation while permanent houses are going up.

Pictures of several large schemes of permanent town building completed before the war and largely inspired by legislation and planning in Britain are also included.

The designer of the exhibition at the Museum of Modern Art is Mrs. Mary Cooke, who worked for Government housing authorities in Washington after her return in 1935 from England, where she worked with the architectural firm Tecton.



R.A. EXHIBITION, 1944. Drawn by Cyril A. Farey.

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REPAIR OF WAR DAMAGE

THE COMMISSION'S "COST OF WORKS" PAMPHLET "ROD.1."

Reviewed by S. HOOKWAY, F.S.I.

THE pamphlet ROD1, introduced to the public on June 26 by the Chairman of the War Damage Commission, is designed primarily to explain the procedure in arranging for the *repair of damage* (hence the designation ROD), and to give guidance in the matter of the assessment of payments for "cost of works" by the Commission. It cannot always be said that Departmental publications issued for the guidance of the public or the taxpayer are particularly characterised by their clarity, but this is a virtue we have been accustomed to expect in publications bearing the *imprimatur* of Sir Malcolm Trustram Eve, and this pamphlet is no exception.

In the Commission's "Practice Notes," published in 1942, it was stated that whilst certain tests were used by the Commission's staff in checking "proper cost," it was not considered to be in the interests of the claimant or the Commission at that time to publish any of the tests, and that whilst the Commission felt that there was much to be said for adopting a standard of procedure and was aware of the potential merits of several proposals, it did not at that time consider it necessary or desirable to adopt any of them.

The present publication indicates that the proposals previously referred to have now been more closely examined, and that the time is now considered opportune to publish the formulas of a policy of "proper cost" assessment on which war damage repair works can go forward on a basis satisfactory to both claimant and builder; one may hope, also, that it foreshadows a national policy of more extensive licensing and wider priorities for repair and reinstatement of war-damaged premises.

The scheme covered by the pamphlet concerns only "cost of works" payments for repairs and reinstatement. It does not deal with "total loss" assessments. Its purpose is to indicate to claimants, their professional advisers and builders, what the Commission will accept as "proper cost" of reinstatement, and to point out the procedure which, if followed, will conduce to the settlement of claims in the quickest and most effective way. Pamphlet ROD1 is, therefore, indispensable to any architect, surveyor or builder dealing with repair of war damage.

There is a broad division of interest between claims which are likely to amount to a total less than £250 and those above that figure. In the case of claims less than £250, the Commission is prepared to accept builder's accounts presented in accordance with the "prime cost" formulas embodied in paragraphs 20 to 34 of ROD1. No prior submission of details to the Commission will be required unless alterations and additions to the property are envisaged besides the war damage repair. In the latter case the proposals must be submitted prior to the work being undertaken so that the "proper cost" attributable to repair may be assessed.

Where repair works are envisaged at an estimated cost above £250, prior consultation with the Commission's Regional Officer is required. The proposals will be examined with a view to ascertaining whether any of the works should be excluded from "proper cost," and to recommending a basis of assessment of claim. The estimation of the "permissible amount" in cases where alterations are proposed will be a province in which the skill of the quantity surveyor will be in evidence. The Commission desires to encourage the execution of these larger works under a contract for a lump-sum price obtained in competition, whether on a basis of drawings and specification, or bills of quantities, or builder's specification and estimate. In straightforward works estimated above £1,500 it is suggested that quantities will be expected. If the circumstances are such that a lump-sum price is not a feasible proposition, then prime cost may be adopted as a basis. In such cases the method of prime cost plus a fixed fee will be preferred to prime cost plus a percentage. A contract on a schedule of prices is not excluded.

Prime Cost Defined.

It is in the definition of prime cost that the pamphlet ROD1 breaks new ground, and paragraphs 28 to 34 are of paramount interest to architects, quantity surveyors and builders concerned with the execution of works under prime cost terms. In examining these prime cost formulas it is important to realise that these are not necessarily contractual between a claimant and his builder. To the same purport that the onus with regard to obtaining the necessary consents to rebuild will be on the claimant or his professional advisers, so also will be the necessity for obtaining the builder's agreement to execute the works on the p.c. terms of ROD1, where his account is to be presented to the War Damage Commission as a basis of claim. The definition of prime cost in ROD1 is the Commission's declaration of what may be regarded as indisputable, subject always to the costs being "reasonably incurred."

These definitions of prime cost will not pass unnoticed in their resemblance to definitions of a similar kind in certain "target" forms of contract recently current, and not only in resemblance but in their additional comprehensiveness. To note but two items, consistent bones of contention in the target form referred to, we notice that allowance is to be made for painters' brushes and for "sharps" to tools occasioned by the specific works.

The definitions are comprehensive of full prime cost, and they are sufficiently flexible to admit of "reasonable" interpretation where minor difficulties may crop up. In this respect it may be surmised that whilst the items defined are indisputable if reasonably incurred, they are not necessarily exhaustive. For instance, a charge for builder's portable site office is allowable, but the equipment of the office is not specified. Would a telephone be admissible? Presumably the answer would come with the Commission's decision whether, having regard to the circumstances, a telephone was an expense reasonably incurred as part of a site office. A similar decision would doubtless be held in suspense upon the salary of a whole- or part-time site-employed cost clerk.

The agreement for prime cost plus a fixed fee will require a specification to be submitted to the Commission of all works to be done, together with an estimate of the prime cost of builder's work and of sub-contract work. These estimates will form the target on which, according to scale, the fee will be fixed. Authorised additional work, or works found on inspection to be unnecessary, may result in a revised estimate and fee.

The agreement for prime cost plus a percentage does not imply a flat rate for the "plus." There is to be a division into four categories each according to scale: Scale A—Builder's direct work; Scale B—Sub-traded work; Scale C—Analogous sub-trades; Scale D—Sub-contracted work.

The classification "Analogous sub-trades" might have been more lucidly designated. The expression is clumsy and does not exactly hit the mark. In this particular document it stands out as a solitary lapse into jargon. What the term covers is mechanical and non-mechanical plant, haulage, and fees and royalties normally paid by the builder. "Plant, haulage, etc.," would surely have been a happier designation than "Analogous sub-trades."

A further noteworthy innovation, and one that will please, is the improved arrangement made for interim payments where the works are extensive. Provision is now made both for "instalment payments" during progress of works and for "payment on account" where works are completed and the claim is pending examination. The forms of certificate required to be completed before settlement of claim and for instalment payment are set out in full in the pamphlet; also the addresses of Regional Offices.

August 1, 1944, is the date on which the scheme outlined in ROD1 will come into effect. It has every appearance of being a well-balanced and considered scheme, and if it relies rather more than do most officially conceived proposals on an anticipation of sound common sense reciprocally applied, that is a confidence that is most likely to find a full response in the building industry.

"SCIENCE AND HOUSING"

AN ARCHITECTURAL SCIENCE BOARD LECTURE.

A PAPER on "Science and Housing" was given before the Architectural Science Board at the R.I.B.A., on June 13 by MR. A. M. CHITTY, M.A., F.R.I.B.A. Following begins the full text:—

When the Architectural Science Board asked me to speak on Science and Housing, I accepted with some diffidence, being expert in neither of these two huge subjects. I mention this as it occurs to me that there will be many other architects who will feel, as I do, that the greatness of this subject will increasingly fill our minds and absorb our energies during the coming years. So it is not as a teacher or exponent that I am here, but in a spirit of inquiry, raising questions to many of which there are at present no clear answers. This point of view will also be my excuse for developing here and there, without further acknowledgment, ideas which owe their existence to the writings of such authorities as Lewis Mumford, Catherine Bauer, Bernal, and Whitehead.

The application of Science to Housing is only one aspect of its general application to the wider reaches of building technology. We live at a vitally important point in time, the turning point of the technician from an hereditary and oral and local tradition of handcraft towards a newly evolving tradition of machine craft. A change, so fundamental in character, when accomplished in so short a time, a mere hundred years, must of necessity be hard and painful. In the case of consumer goods, the change has been rapid and easy—it hurts little to throw away the flat-iron or the phonograph and replace them with more up-to-date conveniences. But with building, this process has been difficult and slow. The past history of the building industry is of a large number of parochial and discreet units relying for their skill upon hereditary and oral instruction passed on from father to son, from master to apprentice. This machinery has been disjointed by the development of transport and communication, but the small units remain, untrained and unprepared for the advent of the scientific method in building. The means by which to bridge this gap has not yet been devised.

Past speakers in this series of lectures have covered two aspects of scientific building. Three recent subjects, timber, welding, concrete formwork, have exemplified particular applications of the scientific method to special subjects. Then the lecture on the "Influence of New Constructional Developments on Architectural Design" approached the subject from the philosophic and directive angle. In the region between these two extremes lies the field of this present subject: that is, the impact of applied science upon a variety of familiar experiences in the everyday business of living.

Together with food and clothing, shelter is the greatest necessity of mankind on the material plane, and finds its expression in the house, which therefore occupies a central position in the whole of our economy. Since some 90 per cent. of the buildings in any urban community are dwellings, it is clear that a balanced and proficient knowledge of housing is essential to any attempt to plan our national life. "The socialised provision of houses, in integrated neighbourhood units" is the economic foundation for the city of to-day.

Yet looking around us, the most casual glance shows the inadequacy of our arrangements. The vast benefits of science, invention and production methods, have improved and cheapened the material objects of civilised life in almost every direction, but with the exception of a few pieces of specialised equipment, the house itself, the centre of the whole complex social system, has scarcely been touched by these influences. "Houses tend to outlast the habits and possibilities of those that live in them, and this is further emphasised by the almost universal tendency of allowing the poor to live in the discarded houses of the rich." To-day even the finest urban dwellings of past centuries are, on the whole, obsolete. Few of them even by the most drastic and expensive renovation and adaptation can meet the requirements of to-day. Such adaptation may provide a degree of shelter, but by no means the framework for living. The reason is simple: such dwellings were designed for a mode of living which is dead and gone; for a way of life more limited and confined than ours; for a different ritual and for other needs.

What are the particular needs of to-day? First, our desire to avoid unnecessary menial labour; second and linked with this, greater space for the better use of the leisure thus gained; thirdly, our more conscientious and efficient care of children, and with it the sense of the importance of play as a basic factor in life from childhood onwards; fourth, our increasing need for privacy and quietness and physical ease in the racket of an industrial world. Such requirements demand a different type of dwelling and different social disposition. As Mumford says: "In many ways we have already crossed the threshold of a new age; but our housing remains behind, clinging to dreams that no longer satisfy, making a parade of sickly archaic tastes, attempting to meet conditions that no longer exist, and failing to take advantage of conditions that do exist and promise far more by way of human reward. Even much of the new housing done by both public bodies and private building exhibits only a stuccoed modernity over an obsolete form."

And here I want to stress the significance and real danger of the change that has taken place. With the increasing possibilities of knowledge and experience to-day, we are at the same time menaced by the evil of over-specialisation, "the danger that outstanding minds may work in grooves with a celibacy of intellect which is divorced from contemplation of the complete facts." By this habit the directive force of reason is weakened and the leading intellects lack balance. The lesson that we may learn from this in the housing field is that no single spectacular advance in technology is of value unless integrated with other developments. To look for satisfactory housing in terms of planning or construction alone is not sufficient. Geographic, social, technical, personal, economic factors must all be considered on a single plane. From this it will be seen that there is no simple solution to this problem, the problem of the house, which is a highly complex adaptation to an exceedingly varied set of difficult requirements.

Since the provision of proper housing is, in the national sphere largely an economic problem, we see at once the uselessness of applying the scientific method to the house without examining the finance of housing from the same point of view at the same time. For example, I for one believe that much greater space is required for proper living and family conditions than heretofore; but the provision of such extra space is futile if the occupant cannot afford to pay increased rent and must take in lodgers to do so. In just the same way, full and proper attention must be paid to the reform of our retrograde system of rating, and to such anomalies as the fact that the largest single factor in house rent is the cost of moneylending.

A word must be said here on the increasing cost of the house and the physical changes that have been responsible. The nature of the house has been changed very largely by the introduction of machinery. The mediæval house was a completely isolated unit standing in its own plot. To-day this physical isolation has been broken down, and every house is part of a larger unit linked to it by every kind of common service, roads and pavements, water, drains, power, telephone, and so on. The dividing line between public costs and occupiers' costs grows year by year more difficult to draw. Housing is clearly becoming a public utility similar to those other services for which we accept public responsibility. In 1935 one-fifth of the housing in Europe was publicly owned or administered, and doubtless this proportion will increase.

Such increases in public services have meant increasing cost, for the house that was once a mere shell has now become a complicated organism, whose equipment may be as much as 40 per cent. the total cost to-day. Similarly, the cost of space within the shell is to-day relatively cheaper than it was. A Ministry of Health survey of housing costs in 1933 showed that a 14.5 per cent. increase in floor area increased the cost by only about 6 per cent. No doubt this tendency will increase.

Construction.

After these general remarks we come to the main part of this talk, which is concerned with the application of the scientific method to house construction. This subject has been dealt with in the recently published Report of the Burt Committee, Part One of which is something of a milestone in the history of housing, because it sets publicly for the first time the problem of the house in terms of numerical standards. Up till now legislation on building has tended to lay down materials and dimensions, which has, of course, given rise to many anomalies. These were later overcome by relaxation and waivers from the more distressing absurdities, and by making wording more flexible. This naturally led to the human difficulties of local interpretation by a variety of persons of differing training and qualifications. Now, however, the proposal is to set standards of performance judged on a scientific basis, and within this new framework it will be possible to fit the wealth of new material and knowledge that increases year by year.

I take here some of the Burt Committee's performance categories, and to these have added some further ones, so that we may see briefly what is proposed and what further steps might be taken in the near future.

Strength and Stability.

The first and most obvious characteristic required in house construction is, of course, strength and stability. So important is this that already we have in existence a well-defined minimum standard under various bye-laws and local legislation. Closely supporting such legislation are the various British Standard Specifications covering objects, materials and methods.

One of Kipling's characters made the penetrating observation: "The British think weight's strength." This misconception dies hard; in fact, it is as yet very much alive. The massive monuments of Dartmoor, the prodigious bulk of Stonehenge, the vast fabric of Durham Cathedral, this is a tale of huge redundancies. It is not till the "age of reason," the eighteenth century, that this blind empiric tradition gives way to slenderness and calculation, and architects begin to foresee the application of the scientific method to building construction.

COMING EVENTS

Saturday, July 8.

INSTITUTE OF QUANTITY SURVEYORS. Mr. V. Mace on "Valuation and Assessment of Fire Losses." County Hotel, Taunton. 2.30 p.m.

Tuesday, July 11.

HOUSING CENTRE. Sir Arthur Hobhouse on "Rural Housing." 13, Suffolk-street, S.W.1. 1.15 p.m. (buffet lunch, 12.45 p.m.).

The Burt Committee puts forward suggested minimum loadings, giving figures for dead loads and superimposed loads; strengths for parapets and balustrades; figures for wind on vertical surfaces with variations for sheltered or exposed location; loadings for flat and pitched roofs, including provision for the effects of suction; strengths for roof coverings.

Such provisions are elementary, but necessary. They take the design of structures a step further, and will, no doubt, in the course of time be adopted and become mandatory. Perhaps the most significant example of the application of the scientific method to the design of structures was that so clearly drawn in Mr. Reece's lecture here recently on "Timber Structures." Here we saw how the oldest and most familiar of English building materials has entered upon a new life. Empiric experience, together with the clear light of scientific analysis, have produced a new code of practice for wooden structures, showing how the intrinsic characteristics of wood can be used with efficiency and economy. Stress grading, lamination, adhesives, and mechanical joints were developments in the process.

And what further developments can science bring about in this category of strength and stability? "The main principles of architecture are just beginning to feel the effect of the revolution introduced by new materials and new processes. It will soon be possible to break altogether with conventional architecture, with its tradition of putting stone on stone or brick on brick unchanged since the time of the Pharaohs, and move in the direction of rational fabrication. The physical functions of architecture are principally insulation and support, but these are perfectly separable factors. Thick walls and heavy girders are a most inconvenient way of providing both together. There is now room for considerable thought and investigation into weight/strength ratios of varying materials, particularly in the new and vast field of light metals.

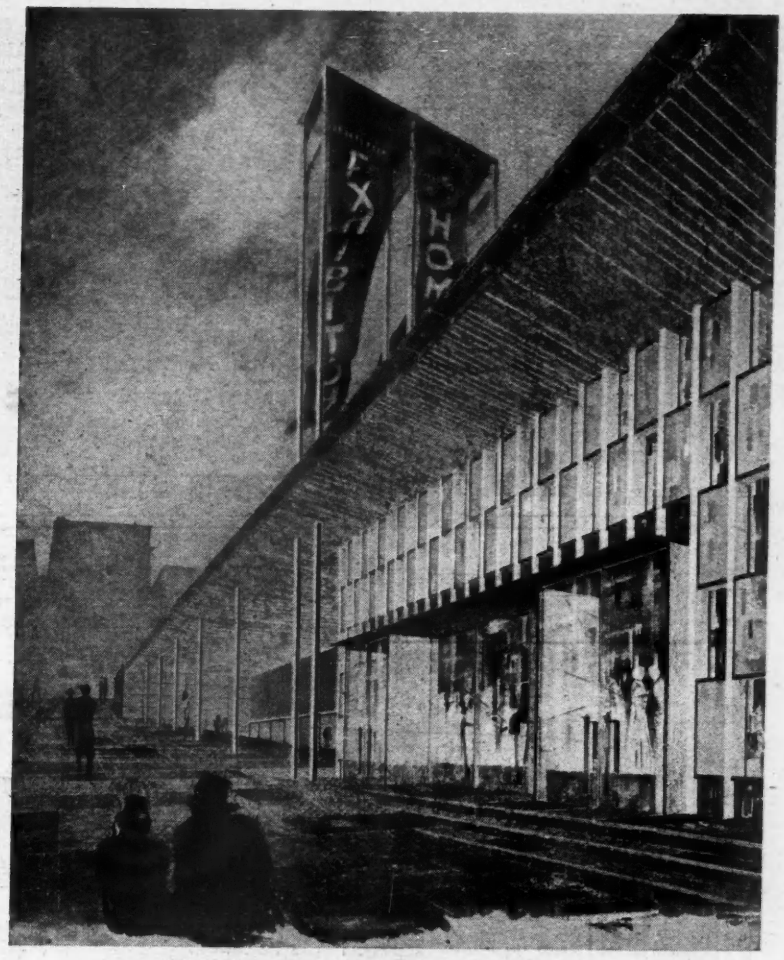
We should not forget that aluminium is the most abundant metal on the earth's surface. The 10-mile crust of the earth is 8 per cent. aluminium against 5 per cent. iron. Magnesium is another important metal in this class to be explored, being of greater strength than aluminium for less weight. Closely allied to the use of light metals is the study of corrosion. With heavy steel structures hundreds of thousands of pounds are spent annually on preservation by painting, lacquering, galvanising, and other treatments, but in spite of this, it is estimated that the annual wastage by rusting is 20 per cent. of the annual output of iron. The problem of corrosion becomes more acute with light metals used structurally, since the margin of safety may be reduced thereby. Interest in this sphere may centre on surfacing technique such as anodising and the Alclad method.

A closer study of the flexibility of materials is also overdue. We see around us to-day very many examples of defects due to the movements of building elements of dissimilar flexural capacity, and research into this subject might help us to classify such materials as a guide to safe combinations.

Calculation of the strength of welded structures is a further development in this category, and this is already assisted by the use of X-rays for internal inspection of welds under test. One of the most striking illustrations of the scientific method applied to structures is the use of polarised light, together with models of isotropic materials such as celluloid in analysing the internal stresses in structural members of irregular shape.

Further experiments will cover the strength of jointing materials (such as mortar in brick walls) and the properties of adhesives.

(To be continued.)



PERSPECTIVE OF ENTRANCE FROM WAVERLEY BRIDGE.

PROPOSED EXHIBITION HALL, EDINBURGH

DESIGNED BY D. DEX HARRISON, A.R.I.B.A., ERNEST SEEL, A.R.I.B.A., AND T. M. CARTLEDGE, A.M.Inst.C.E.

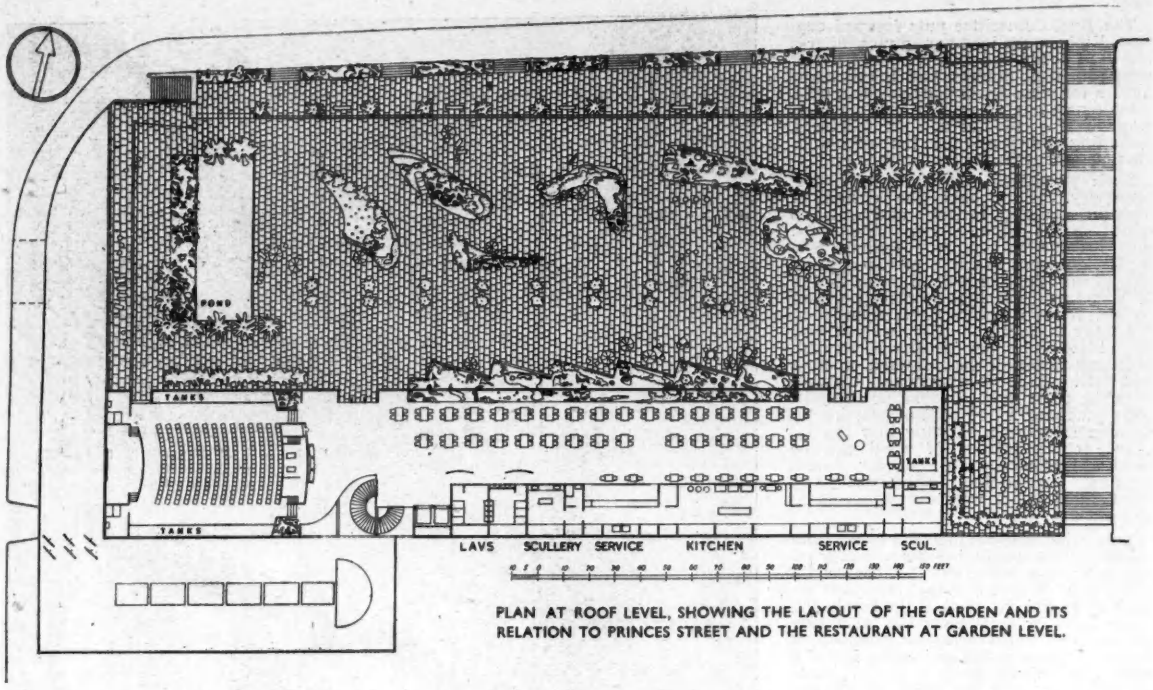
THIS BUILDING WAS THE SUBJECT OF AN open competition held in 1939 for an all-purpose hall to be used primarily for exhibitions and secondarily for concerts and displays. The site adjoins Princes-street to the north and Waverley Station to the south, and one of the conditions was the provision of a garden at roof level accessible from Princes-street. On this account, and so as to retain the view over the site towards the Castle, the overall height of the building was restricted.

The notes that follow are taken from the report of the winning scheme and the illustrations are from a model recently prepared by the Council and from the competition drawings. The perspective is a preliminary sketch of the entrance from Waverley Bridge, prepared by the architects.

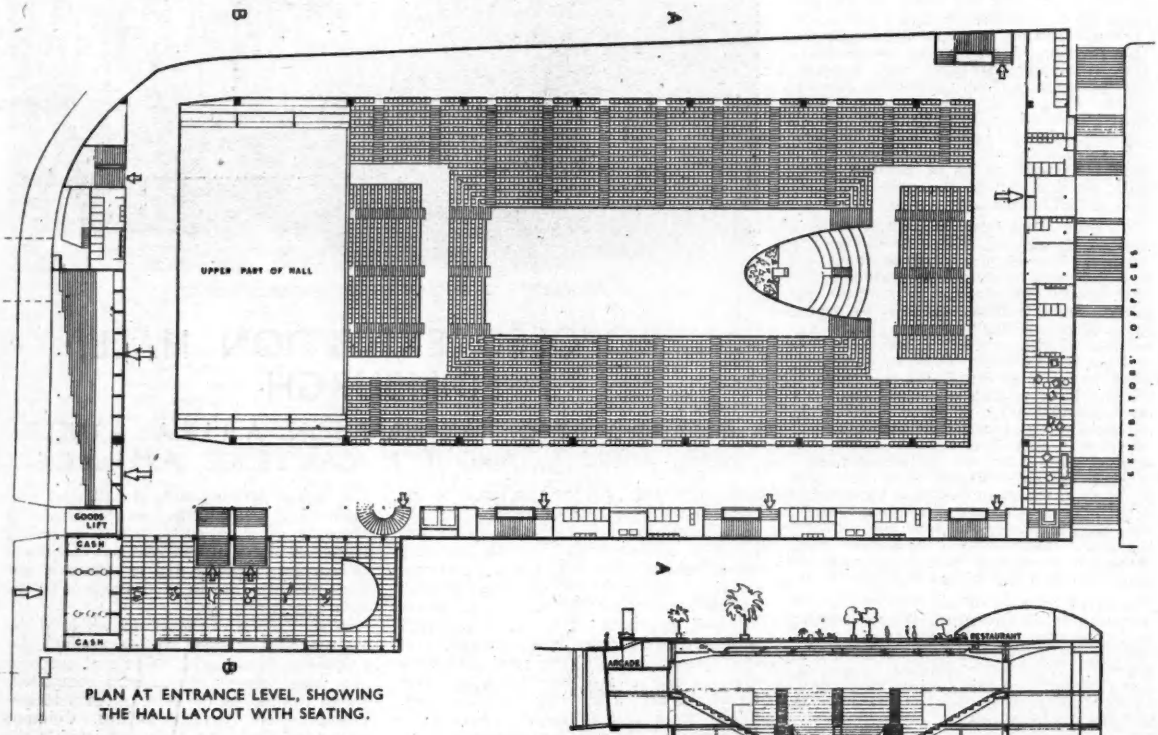
General.—The design has been based on the following considerations: (a) Provision of maximum exhibition area as a primary object (b) adaptability by provision of speedily erected, versatile seating and screening arrangements to suit a variety of purposes; (c) minimum disturbance of existing adjoining structures; (d) rapid and easy circulation with any of the various arrangements of halls; (e) simplicity of structural expression; (f) economy of main costs, whilst including items not cheap in first cost but calculated to increase efficiency and to reduce labour costs and time losses in conversion to the varied requirements.

Main Layout.—Almost the whole of the main exhibition floor level is available for exhibition space, with additional space in the wide balcony which runs completely round the hall at the level of the principal entrance from Waverley Bridge. Columns in the main hall have been restricted to the minimum number and size and the maximum spacing consistent with proper headroom.

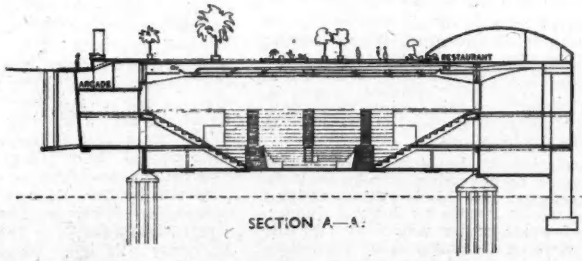
Adaptation.—To enable rapid changeovers to be made, almost the entire terrace seating is permanent, bays of terracing being hinged to the balcony edge and capable of being swung up to the ceiling by motors and cable gearing. A well in the main floor contains permanent concrete steppings covered by a removable sectioned floor of steel decking. Subdivision of the main hall into smaller halls is obtained by double rolling screens installed in the false ceiling, with pro-



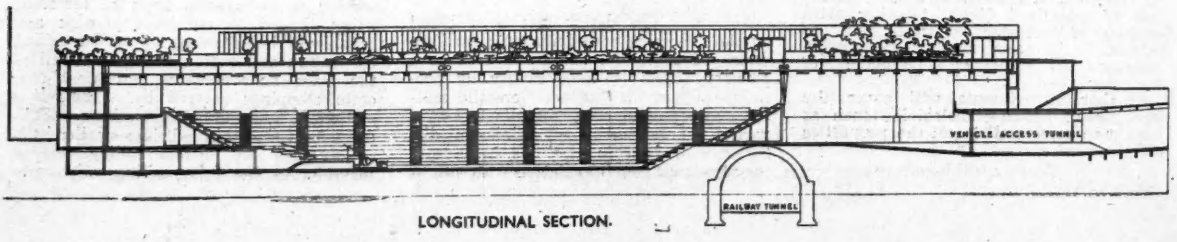
PLAN AT ROOF LEVEL, SHOWING THE LAYOUT OF THE GARDEN AND ITS RELATION TO PRINCES STREET AND THE RESTAURANT AT GARDEN LEVEL.



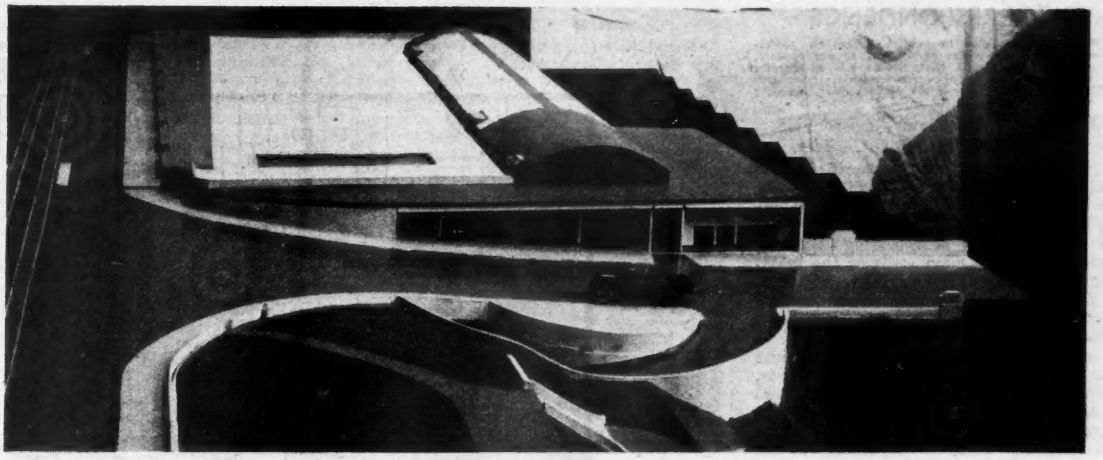
PLAN AT ENTRANCE LEVEL, SHOWING THE HALL LAYOUT WITH SEATING.



SECTION A—A.



LONGITUDINAL SECTION.



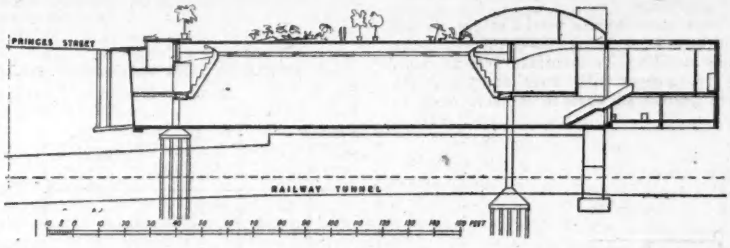
VIEW OF MODEL, FROM WEST.

vision for connecting them to the main floor level by framed folding screens. With separate lettings of the halls, circulations may be kept entirely separate. The restaurant and cinema can be let separately from each other and from the main hall.

Goods Entrance.—Goods entrance is provided by underground tunnel from Waverley Bridge *viâ* the gardens, with additional goods lift large enough for railway containers.

Circulation and Exits.—The seating provided is up to the maximum number of persons which it is considered can be reasonably dispersed by the two adjoining thoroughfares, Waverley Bridge and Waverley Steps.

Construction.—Steelwork has been adopted for the main framework of columns and beams for reasons including the following: (a) Lightness of superstructure and economy of piled foundations; (b) minimum obstruction of space; and (c) speed of erection. The piled foundations are reinforced concrete pressure piles to avoid vibration during erection. Longitudinal plate girders resting on the two lines of columns carry lateral plate girders of 129 ft. 8 in. span at 14 ft. 8 in. centres, spanning the main half. Certain of these latter girders continue as cantilevers, carrying the block adjoining the railway station, no load whatever being



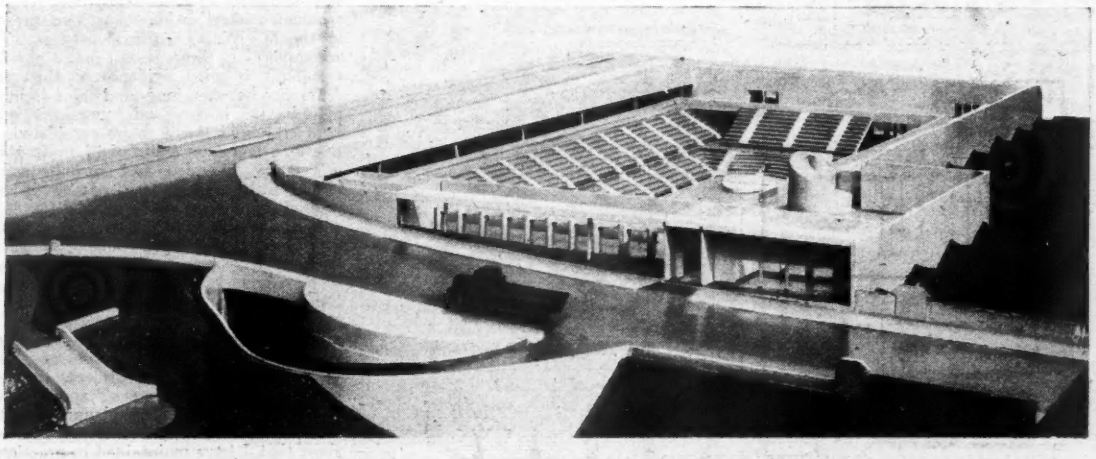
SECTION B—B.

placed on the railway station retaining wall. The main columns on the south side of the hall carry a maximum load of 826 tons each, supported on piled bases. The main columns on the north side carry a maximum load of 507 tons each.

Heating and Ventilation.—Heating of the building is mainly by air-conditioning with a small amount of local radiant heat. A double air-conditioning plant permits freedom of air control in the event of two portions of the hall being let separately. The boilers are gas-fired with a capacity of 3,000,000 B.T.U. per hour. The cost of an average 24 hours' running is estimated as follows (gas at 1s.4d. per 1,000 cub. ft.): Heating, £12; ventilating, £3 5s.

PROPOSED EXHIBITION HALL, EDINBURGH

DESIGNED BY D. DEX HARRISON, A.R.I.B.A., ERNEST SEEL, A.R.I.B.A. AND T. M. CARTLEDGE, A.M.Inst.C.E.



VIEW OF MODEL, SHOWING HALL ARRANGED FOR SEATING WITH CENTRAL ARENA

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The M.oW. Bungalow: Revised Plan.

To the Editor of *The Builder*.

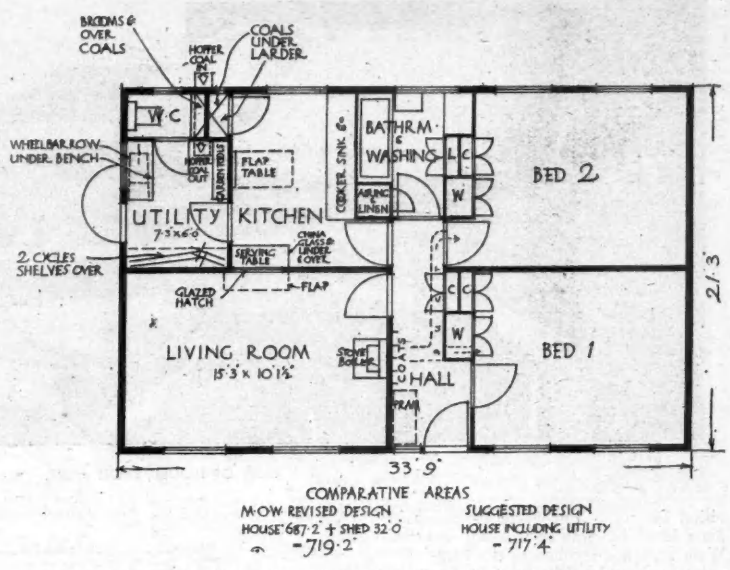
Sir,—Now that the authorities have extended the disposable area of this house by the addition of the shed, I should like to suggest that better use could be made of the space by incorporating the shed space within the main walls of the building on the lines of the accompanying plan.

The difference in cost could not be material, but the advantages of having a practicable workshop (room for two cycles—coal accessible without going out into the wet—the w.c. near the back door, handy for children with muddy shoes without coming right into the house—the avoidance of draughts in the kitchen) need no stressing, while the separation of the kitchen from the living-room and bedrooms by means of replanning the position of the hall means a great gain in comfort and convenience.

These amendments would retain all the good points of the revised official house while avoiding its manifest defects, *e.g.*, the living-room with three doors and the stove placed so that it is next door to impossible to sit round the fire—the impossibility of preventing noise and kitchen smells from getting all over the house—the nuisance of having to go to the w.c. from the bedrooms through the living-room (going through the kitchen doesn't matter).

The only apparent disadvantage that I can see is the additional cost of length of flow and return pipes. This should not affect the efficiency of the stove, and the additional cost is such a trifling affair that it is not to be considered against the advantages referred to.

London, E.C.2. W. F. C. Holden.



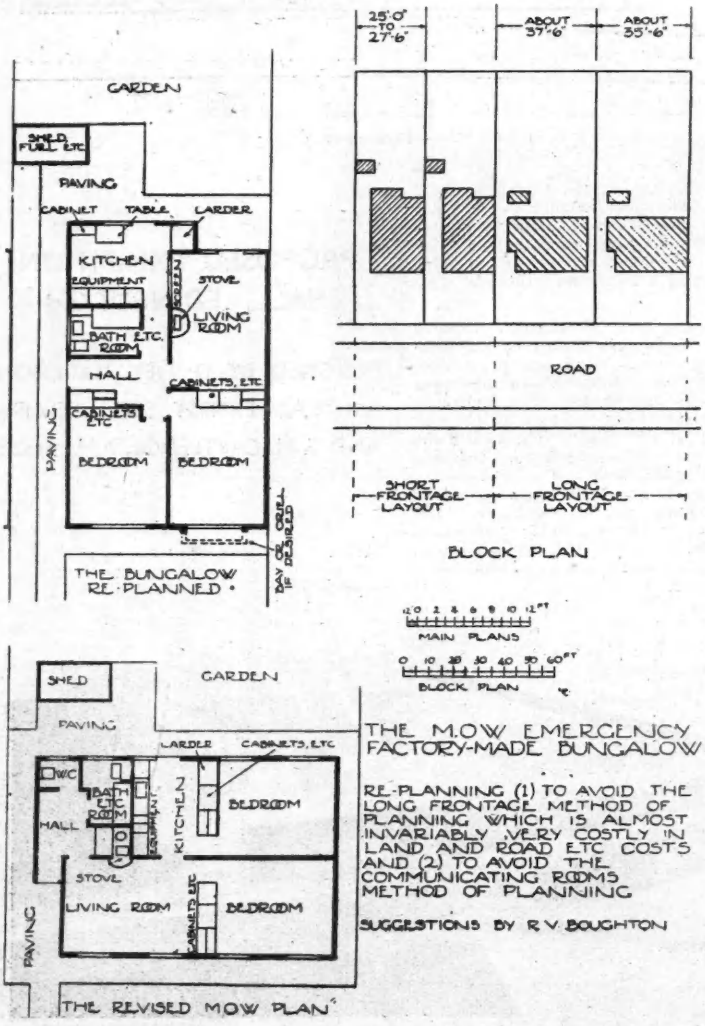
THE M.O.W. STEEL BUNGALOW : MR. W. F. C. HOLDEN'S SUGGESTED VARIATIONS.

The M.o.W. Bungalow: Long- v. Short-Frontage Planning.

To the Editor of *The Builder*.

Sir,—As is evidenced by the various building technical journals, many architects and others have submitted revised plans, more or less good, for the M.o.W. emergency factory-made bungalow, but as far as I have seen, all follow like sheep the principle of long-frontage planning, which is generally very costly in connection with land, roads, sewers and services, etc. *The Builder*, in its leader of May 12, drew attention to this matter, and when I first saw the plan I immediately noticed this economic defect, which was also present in the M.o.W. agricultural cottage. The accompanying illustrations indicate what I submit is good evidence of the great difference between long- and short-frontage planning of houses and bungalows when land economics have to be considered. I live in a house on a site of 27 ft. frontage in "stuffy" London, and am quite happy and healthy. Such a frontage in the country would surely be even better. To use up valuable land frontage, etc., at the rate of about 40 ft. per house or bungalow for emergency temporary dwellings appears to be extremely wasteful and must add to the total cost and rent in one way or another.

In the plan of the short-frontage bungalow I have attempted to rearrange the various rooms and compartments to avoid the "communicating-rooms" and "merry-go-round" principle of planning of the M.o.W. An examination of my plan will show that I have maintained in practically every respect all the M.o.W. main features,



THE M.O.W. STEEL BUNGALOW: MR. BOUGHTON'S SUGGESTED VARIATIONS.

such as size of rooms and grouping of the kitchen and bathroom units; where I have transgressed a little is in combining the bathroom and w.c. (which is not objectionable with a small family), and in rearranging some of the cupboards and cabinets. Some persons may adversely criticise the placing of the living-room at the rear of the bungalow. The answer to such criticism is that I believe the majority of the public prefer the room to overlook the back garden rather than the front (the dissentients may be those who like to watch their neighbours' goings and shortcomings). Also, if the bungalow is intended for young married couples, without children or with only an infant, one of the front rooms can be used as a general room. It will be noticed that the main door to the bungalow faces the blank flank wall (blank means unperforated, and nothing else), and not on to the neighbour's door and windows—a little principle of planning which often prevents much wasteful eloquence.

Another advantage which may be claimed for the short-frontage plan is that it causes less of the elevational æsthetics of the bungalow to be obvious from the road, that the home-lover can with truth call it "The Gables" and cast shame on those critics who have used such nasty words in describing the façade. A little bay window or oriel, as shown, may increase the grace of the elevation and provide a window board for the largest aspidistra in the world.

R. V. BOUGHTON.

Streatham, S.W.16.

Vacancies for Architects.

TO THE EDITOR OF *The Builder*.

SIR,—In a recent issue of *The Builder* a correspondent made a most inaccurate statement as to the proportion of members of the R.I.B.A. qualified by examination.

If he would refer to the annual report which was published in the April number of the R.I.B.A. Journal he would see that the total number of members is 7,294. Of these, 4,779 are Associates, all of whom have passed the qualifying examination. Of the 1,914 Fellows, 1,096 were elected from the Associate class and passed the qualifying examination for the Associateship; 478 Fellows were elected from the Licentiate class after examination. This gives a total of 6,353 who have passed examinations out of the total membership of 7,294—over 87 per cent.

LEONARD CECIL HOWITT.

London, W.

TO THE EDITOR OF *The Builder*.

SIR,—In answer to Mr. Athoe and to Mr. Mander (*The Builder*, June 9), I infer that any public body is exercising its legal right in advertising for the services of an architect who is qualified by that examination which complies with the requirements of the Architects' Registration Act. Thus a B.Arch. may be so qualified, and, as such, the B.Arch. can please himself whether he becomes a member of an architects' society or elect to be merely a registered B.Arch.

It may be well known that there must be a fair number of registered "architects" who have not succeeded in passing one of the statutory examinations, and that when these "back door" gentlemen pass away we can look forward to those halcyon days when the Register of Architects contains the names of only those architects who have manfully passed the requisite examination. Gone are the days when architects, in virtue of years and experience, may be elected members of a society.

It seems to me that Mr. Athoe's criticisms largely savour of "sour grapes," and as regards your correspondents who prefer to write over a *nom de plume*, what interests your readers are the facts and opinions expressed as the names of the writers are of very minor importance.

UNREGISTERED "ARCHITECT."

Post-War Housing and Population.

TO THE EDITOR OF *The Builder*.

SIR,—May I be permitted to draw attention to one feature of the post-war housing problem which appears to have been completely overlooked? It relates to the urgent needs of population which have been so impressively emphasised in recent months and years.

Young people are admonished that a family of four must be regarded as the minimum requirement if our national life is to be sustained and built up, and legislation for family allowances and other assistance is proposed to make this possible. Yet these same young people are offered tiny bungalows, containing two small bedrooms in which to rear their four children.

It is true that these bungalows are regarded as temporary, but on the Ministry of Works' own admission "temporary" means ten years, and I will hazard the guess that the ten will extend to twenty—or shall we say the present young generation's span for reproduction.

If the need for population is as urgent as it is represented—and there is no reason to doubt it—then pressure must be brought to bear on the Government to provide the necessary accommodation, even in its temporary housing proposals.

I suggest that the M.o.W. bungalow should be planned and designed so that, on application from the tenant at any time for increased accommodation, two additional bedrooms could be provided. No objection need be raised, on housing of a temporary nature, to access to bedrooms 3 and 4 being obtained through bedrooms 1 and 2.

Provision for this possible extension would, of course, have to be made in the estate layout by allowing sufficient garden space at the side of the house.

Worcester. R. F. COLLINS, M.I.O.B.

Garages in Local Authority Housing?

TO THE EDITOR OF *The Builder*.

SIR,— Does your correspondent, Sir Noel Curtis-Bennett, realise that, generally speaking, local authority housing is subsidised by rates collected from non-local authority householders?

It seems to me that people who can afford to run a car can quite comfortably attend to their own housing requirements and leave council houses to those so badly in need of them.

On the other hand, if the idea is considered a good modern proposition, why stop at a garage? It would be just as logical for the Local Authority to supply the car also—or would it?

St. Annes-on-Sea. F. HOLMES.

** It is not without interest to note that the L.C.C.—in its proposed development plans for the Headstone-lane Estate, Middlesex—is to provide garage accommodation for about 32 per cent. of the larger-type houses. See page 2.—ED.

What is Modern Architecture?

THE Mars group proposes to hold a public discussion meeting at the R.I.B.A. on Monday, August 21, at 6.30 p.m., on the subject "What is Modern Architecture?" Members of the group will give short prepared speeches to promote general discussion afterwards. Sir Charles Reilly, an honorary member of the group, will preside and sum up.

STAGE AND THEATRE EXHIBITION

BRITISH DRAMA LEAGUE PROJECT.

AN exhibition of designs and models for stages and theatres as examples for post-war building or reconstruction will be organised by the British Drama League in the New Year. The Provisional Committee which has been formed consists of Lewis Casson, Elsie Fogerty, C.B.E., R. H. Gillespie, Nicholas Hannen, Norman Marshall, C. B. Purdom, Richard Southern, Clough Williams-Ellis, F.R.I.B.A., and Geoffrey Whitworth.

The exhibition will include the following sections :—

(I) Plans for a large theatre and stage. One of the exhibits will be the plans made by the late Sir Edwin Lutyens and Mr. Cecil Masey for the National Theatre at South Kensington.

(II) For a stage in a civic theatre holding approximately 800 people.

(III) For a stage in a little theatre holding approximately 200 people.

(IV) For stages in schools, colleges, community centres and village halls.

(V) For a transportable fit-up stage suitable for temporary use in large halls.

(VI) For a factory-hostel theatre.

(VII) For a garrison theatre.

The exhibition will first be shown at the Royal Academy, Burlington House, early in 1945, and then, by arrangement with C.E.M.A., toured throughout the country. The object is to present a standard series of exemplary exhibits rather than a general collection of theatre plans. In many cases it is hoped to make use of designs of existing theatres, but the submission of new and original designs will also be welcomed by the Committee. Special attention will be paid to such details as dressing-room accommodation, storage space and the like. Economy and practicability will be main considerations. Submissions should be forwarded not later than October 1 to the British Drama League, 9, Fitzroy-square, London, W.1.

A NATIONAL THEATRE

SPEAKING on "Towards a Real National Theatre" at a recent lunch-time meeting of the Town and Country Planning Association, MISS SONIA DRESDEL said if we were to have a truly National Theatre we must have in every town of 10,000 or 15,000 population and over a community building catering for many different kinds of social activities; having a library and reading room; a gymnasium; a hall for public meetings and a smaller room for committee meetings, play-reading circles, and so on; having an excellent café and restaurant, and having an intimate theatre with a properly equipped stage of a reasonable size and with adequate dressing-room and box-office accommodation. The whole building should be surrounded by a really charming garden or park, which should, as a matter of course, be landscaped, so as to provide facilities for open-air performances in summer.

If every moderate-sized town had such a building, nine-tenths of the battle would be won. Whether such a building should be associated with some other essential service of the town—with a health service or an education service—was a matter for discussion. Whether such a centre should take the form of one building or a group of buildings was also a matter for discussion; no one would suggest that all towns should follow one set pattern in providing a home for the arts.

MAN-POWER STRUCTURE OF THE BUILDING INDUSTRY

AN OBJECTIVE ANALYSIS.

By H. C. HARLAND, F.I.O.B.,
President of the London Master Builders' Association.

FEW economists and certainly no politicians ever speak of reconstruction without stressing the vital part which the building industry will have to play in the post-war era and, naturally, the Government has expressed its views on the subject.

It is interesting to consider, therefore, what chance the building industry has of fulfilling the task which the devastation of war has set it. Will the industry be capable of carrying out the Government's 12-year plan for the building of 4,000,000 houses? Much depends on the man-power available. The official estimate is that 1,250,000 men will be needed.

This figure is not, at first sight, a formidable one, though while it represents an increase of only 10 per cent. on the pre-war (1939) figure, it is nearly 200 per cent. more than the current strength and nearly 100 per cent. in excess of the estimated *trained* man-power available at the cessation of hostilities. The building industry will, therefore, in fact be faced with a serious shortage in man-power.

What, then, is the nature of the problem? What are the operative factors? How can a satisfactory solution be ensured?

The Nature of the Problem.

Much depends on the power of the industry to attract new entrants. A guaranteed week and holidays with pay, both introduced during the war, are to-day accepted as measures to be retained in peace-time and will undoubtedly assist in attracting men into the industry. The new Apprenticeship Scheme under a National plan makes the industry definitely attractive to lads leaving school. One unpleasant aspect, as far as the operative is concerned, is the past record of unemployment in the building industry, which has always been continuously above the national average. This was obviously unavoidable where men are exposed to the elements as against people occupied in factories, where they are under cover.

In the three months preceding the outbreak of war, the unemployment percentages in the building industry amounted, in spite of the favourable summer season, to 11 per cent. of the insured, and in building and contracting to 15.7 per cent., compared with a national average of 8.9 per cent. This is a natural reaction to the war cloud hanging over the building industry, which resulted in the cancellation and reduction of many building undertakings and contracts.

It is safe to say, therefore, that the inflow of labour will to some extent be largely determined by the prospects of continuous employment and favourable working conditions. This in turn determines the age structure of building labour, which exercises such an important and lasting influence on efficiency and thus on labour costs.

An analysis of the age structure of the building industry, based on the 1931 Census figures, reveals that building labour is older than the average of occupied labour, proving that it is more healthy than many occupations. Of those engaged in building, 35 per cent. were over 45, compared with the average for all industries of 29 per cent. The percentage of juvenile workers (under the age of 18) lies far below the national figure.

The assumption that the age structure of 1931 is representative for the pre-war period is supported by the fact that little or no change took place between 1921 and 1931. In that decade, however, the number of men engaged in the building industry increased by 44 per cent. as against an increase of only 9 per cent. in all industries, but the number of building craftsmen in all age-groups except juveniles increased less than that of all building workers. This is mainly accounted for by the fact that, generally speaking, entrance to craftsmanship is *via* apprenticeship and by the great increase in general and unskilled labour, which doubled in these ten years, and in the decisive age-group 18-41, which rose by 116 per cent.

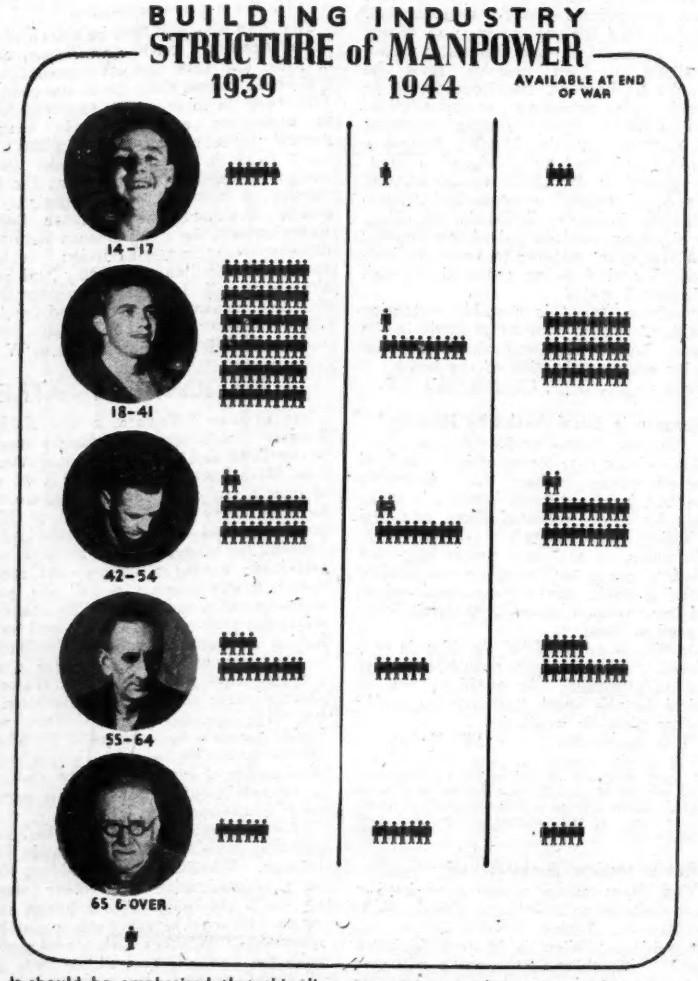
In this war the ageing process has been more intense than in the last, principally because of the longer duration of the war and the more thorough mobilisation of man-power. So far, 550,000 men have been called up for active service, and another 145,000 have been transferred to other industries. In all, building labour has been diminished by some 58 per cent. during this war, as against 42 per cent. in 1914-1918. The crisis will probably be accentuated by spreading demobilisation over a longer period.

At present, the number of men of the calling-up age (18-50) in the building industry has shrunk to about one-fifth of pre-war strength, so that the industry is now deprived of the bulk of its most efficient workers. Unemployed labour over 45, an age-group in peace-time responsible for 45 per cent of all unemployed building workers although representing only 35 per cent. of the total building labour, has been largely reabsorbed into the industry; these number approximately 35,000 men.

War-time Changes in Personnel.

The change which has taken place can be summarised thus: The total number of operatives in the building industry in 1939 was 1,130,000 (this figure includes both employed and unemployed—*i.e.*, potential man-power). Deduct those called up for the Armed Forces—550,000—and those transferred to other industries—145,000—and the total force is reduced to 435,000. Add to this number those who have deferred retirement—35,000—and the current strength of the man-power at present engaged in the industry is 470,000.

Examination of the various age-groups reveals that before the outbreak of war only 40 per cent. of building operatives were over 41 years of age. At present



It should be emphasised that this diagram purports to be no more than an estimate of the manpower situation in the building industry. The figures are, however, the outcome of considerable research on the subject and are arrived at after the careful sifting of available evidence.

75 per cent. are above this age, and 50 per cent. are over 55.

The industry is faced, therefore, not only with a quantitative deficiency in manpower, but with a qualitative deficiency also.

Leaders on both sides of the industry agree that the probable labour force available at the cessation of hostilities will be in the region of between 700,000 and 750,000 men. This will consist of the 470,000 already in the industry, and the balance will be drawn from those who have been demobilised and those who have returned from various war industries. Should the war be over by 1945, those in the latter two categories will be six years older than in 1939, when the age structure of the building industry was already considerably above that of industry as a whole.

With this force it is hoped to erect 300,000 site-built houses in the first two years after the war—100,000 in the first year and a further 200,000 in the second. In the first two years and four months after the last war, with a strength in the industry of 780,000 men, only 100,000 houses were built, absorbing about 15 per cent. of the strength available. It cannot be argued, however, that because the industry will have a force numerically weaker and considerably older that it cannot carry out a programme three times greater than that realised twenty-five years ago. It all depends upon the priority to be given to housing and as to preparation of plans and arrangements. We shall, however, as Viscount Maugham said in the House of Lords on March 23, 1944, taking everything into consideration, be doing well if we manage to realise these figures.

Training Disabled Men.

One incontrovertible fact emerges from all these statistics: trained building labour will be scarce. There is, however, one other source which remains to be tapped—the disabled.

There is still a considerable amount of ignorance concerning the capabilities and the work potential of the disabled. It was popularly supposed at one time that men who suffered from physical disabilities were fit for only menial jobs. However true it may have been, it is certainly not true to-day. Schemes are in operation both in this country and America for the rehabilitation of the disabled. These schemes provide for the training of disabled men in practically all trades, and while both countries provide equal facilities for training, America has, as Major Manningham-Buller pointed out in the House of Commons on January 27, gone farther than this country in the keeping of close and accurate records of the men's work after they have been established in industry. Owing to risk of operations in the building trade, it is important to have men physically fit to perform the arduous duties required, but there is scope for the employment of a percentage of men with physical disabilities.

The Disabled Persons (Employment) Act, 1944, deals very adequately with the employment of this class of labour, and perusal of the Act will show the casual observer what care is being taken to absorb certain percentages in every industry in the future.

Testimony as to the success of employing disabled workers in the building industry is provided by Lord Portal's mission, which recently returned from a tour and study of building methods in the U.S.A. "We were interested," they state in their Report, "in the American scheme for the rehabilitation of men injured in accidents. The scheme goes back to the years immediately following the last war, when it started with the rehabilitation of disabled men released from the Services. We found general agreement in the industry that the results have been highly successful." This can be said equally of the war-wounded from the last war under the scheme which operated in this country, and which, as the British Legion pointed out in its interim report on Training and Employment of Disabled Men, progressed smoothly until the trade depression began in the autumn of 1920.

Thus the nature of the problem which faces the building industry is *scarcity*, and the operative factors, *man-power* and *time*. What, then, is the solution?

The Government, Lord Beaverbrook told us recently, has laid down a plan to raise the labour force in the building industry to the strength required by the programme, but the ultimate success of such a plan lies not with the Government but with the industry itself. Once the plan has been initiated and the facilities provided for the training of the necessary man-power, it will be the building industry which will be responsible for carrying out the programme.

The Government's main duty is to see that house-building schemes are ready to ensure the absorption into the industry of all who show aptitude, whether they be apprentices, fit men demobilised and a percentage of disabled men.

Only the willingness of the industry to utilise every available source of man-power can ensure the post-war building programme being carried out in an orderly and economical manner. Admirable and necessary as the Government plans are, no benevolent bureaucracy can achieve by legislation that which the building industry alone, by its enterprise, efficiency and experience, is qualified to attempt.

THE RURAL HOUSING REPORT

STATEMENT BY A.B.T.

COMMENTING upon the Third Report of the Rural Housing Sub-Committee of the Housing Advisory Committee of the Ministry of Health, the Association of Building Technicians, in a statement just issued, makes the following observations:

We suggest (1) that the Survey [for the classification of all rural housing] should be put in hand at once and its completion aimed at by the end of the war; and (2) that all minor work of reconditioning and repairs should be started now, using some of the undoubted surplus of building labour, to make way for larger works when the war is over. The Report suggests that it might be possible to use voluntary help in connection with the survey: a good idea which, we believe, would evoke a willing response.

The problem of rural housing is complicated by the very large number of local authorities dealing with it. Some sort of grouping is necessary, not only for ease of administration but to help the backward areas. For this, Joint County Committees are suggested, attended by officials of the Ministry of Health. They should be set up at once.

Another step forward (if it is implemented) is the recommendation that the Minister should make the employment of a qualified architect compulsory.

It is recommended, too, that the small builder should be encouraged to start business again on a wider scale as soon as possible. The Report is probably correct in saying that he has "so far proved the most effective instrument in rural conditions."

TOWN AND COUNTRY PLANNING

NEW ORDER FOR CONTROL OF INTERIM DEVELOPMENT.

THE draft of a new Order defining and regulating the powers of control over development to be exercised by local authorities during the period between the date of coming into force of a resolution to prepare a planning scheme and the coming into operation of that scheme, has been published by the Stationery Office (price 3d.) on behalf of the Minister of Town and Country Planning. Interim development control has hitherto been exercised through an Order made in 1933 under the Town and Country Planning Act, 1932. The necessity for a new Order rises mainly from two causes: First, the war and the changed outlook on planning have materially altered the requirements to be met in the exercise of planning control; and secondly, the Town and Country Planning (Interim Development) Act of 1943 has given local authorities wider powers of interim development control, the practical application of which needs to be more precisely defined.

In view of the abnormality of war-time conditions, it is proposed that the new Order shall remain in force for the duration of hostilities only, at the end of which time a further Order will be made.

The draft Order defines the degree of control to be exercised by setting out five categories of development which are ordinarily to be permitted. These are:—

(1) Development carried out by a body exercising statutory powers on land specifically designated by Parliament (*e.g.*, the construction of a new waterworks). This class is limited to development authorised by statute before the date of the new Order. In the case of future statutes, the Minister proposes to secure any necessary planning control during the passage of the enactment.

(2) Development by a local authority or by a statutory undertaker which has been sanctioned by a Government Department before the coming into effect of the Order.

(3) The restoration of war-damaged property, except in cases where it involves an increase in size or a material alteration of the exterior of buildings.

(4) Alterations to, and the maintenance of, existing buildings, provided the alterations do not affect the exterior and are not connected with a change of use.

(5) Certain specified categories of development carried out by statutory undertakers, mining undertakers and certain other authorities. These are set out in detail in the Schedule to the draft Order, and include a variety of constructional and other work by railway companies and by undertakers responsible for docks, harbours, canals, electricity, gas and water supplies, mining, land drainage, sewerage and lighthouses.

In certain special circumstances, however, as, for instance, where there are proposals for the redevelopment of an area, control may be exercised even in the case of development falling within one of the above "permitted" categories. These special circumstances, whether in relation to areas or particular cases, are fully set out in the Order. In the case of development in category 5, Part II of the Schedule specifies the kinds of development (including maintenance) which remain permitted in all circumstances.

Among other alterations in procedure the draft Order also introduces special machinery for dealing with development by a local authority or statutory undertaker where sanction by a Government Department is required, and with development required for war purposes, so as to secure that in the more important and difficult cases the application for planning permission can be decided by the Minister of Town and Country Planning in consultation with the sanctioning Department.

SOLID FUEL AND THE MODERN HOUSE

LECTURE AND DISCUSSION AT THE HOUSING CENTRE.

"SOLID Fuel and the Modern House" was the title of an address given by MR. R. A. DUNCAN, F.R.I.B.A., at the Housing Centre on June 27. Mr. Duncan is a Director (Architecture and Building) of the British Coal Utilisation Association. COLONEL NEWCOMEN presided.

The main theme of the address was the necessity of providing more efficient appliances in the domestic house for the use of coal. Rent, said the lecturer, must bear a relationship towards the family income, and before the war 50 per cent. of our population had family incomes of less than three pounds a week. Out of this ten shillings was quite sufficient to pay for rent. After rent came the running costs of the house, i.e., heating, cleaning, certain furnishings, etc. It was no use providing a family with more floor space than they could afford to use, or even more window space; because more window space meant a greater expense for curtains and also for heat. Gas companies had produced figures to show that people in the section of the community he was now considering spent 5s. 6d. a week on heating and lighting for all purposes, of which 4s. 6d. was for heating. Only a quarter of the heat that might possibly be obtained from the coal was in fact obtained by the ordinary method of burning in an open grate. Even so, it was cheaper than gas or electricity, but in regard to these the user had the advantage of quick service, and there were other advantages from a national point of view. He did not think coal would be cheaper after the war than it had been previously. It would almost certainly be dearer. It seemed obvious that the section of the community he was considering would not be able to afford more than one fire. They might get lighting, cooking and a certain amount of supplementary heating from gas and electricity, but they would not use these continuously. More heat could and should be got from the coal they burned. This could be done in a totally enclosed stove, but such a stove was suitable for one purpose only, and what was required was an all-purpose stove. Besides warming the house it must do cooking, provide continuous hot water, etc., and such a stove might be devised giving up to 65 per cent. of the calorific value of the coal consumed. If people could not afford more than one fire in the house, this should be of the back-to-back variety. When in use for the kitchen a drawbridge would shut it off from the sitting-room, but when required for the sitting-room the drawbridge would be lifted and the occupants of the room would be able to sit by an open fire. Until now this kind of stove had not been very efficient, but research was now being made to produce a stove which would give radiant heat, do cooking, provide constant hot water, etc., and get a great deal more than was now generally obtained of the possible heating value of the coal.

Speaking of other aspects of the housing problem, the lecturer said he had been to see the Fortal house. He had been told it was to cost £550. That was an insane price to pay for prefabrication, but at £250 it would not be a bad article. There was no reason why suitable houses should not be delivered at prices people could afford. Part of our difficulty was because of the number of middle-men who each had to get a profit, and part of it was because building still consisted of the assemblage of all sorts of odd bits and pieces from various suppliers, and always with transport added. Such costs would disappear if production organisation was under one head.

MR. WILLIAMS (of the Coal Utilisation Council) said coal would be dearer after the war than previously. The open fire was one of the first things people asked for, and the coal industry had started a programme of research to get more efficiency. But if we were to try to reduce the cost of the house we must not try to reduce proportionately the cost of the heating appliances. Before the war most houses were fitted with cheap solid fuel appliances. The efficient stove would cost more, but it would be a mistaken economy to cut down the cost of the house by putting in inefficient appliances.

MR. DUNCAN added that to make a complete all-purpose coal-burning unit, admitting a back-to-back grate, would cost £18, as against £7 spent on present inefficient appliances. At the same time attention should be given to thermal insulation. This could be greatly improved. He did not think 9 in. of brick wall with an inch of plaster inside gave a satisfactory degree of thermal insulation.

Further discussion followed, and among things mentioned were smokeless fuel and district heating.

On these points Mr. Duncan said that smokeless fuels increased cost. One reason we got smoke was because coal was not being burned properly. The appliance he was working on showed a reduction of something like two-thirds of the smoke taken over 24 hours, and this was possible even with highly bituminous coal. As to district heating, as far as he knew there was only one country where it had been tried at all extensively. That was the United States. The case was a little dubious except where circumstances were favourable.

The CHAIRMAN said economy in district heating depended on whether it was the cheapest method for the place where it was applied. We should not get the house Mr. Duncan had been talking about until we got far more co-operation between the Ministry of Works, the Ministry of Fuel, manufacturers and architects.

B.S. Specification.

The British Standards Institution issue from 28, Victoria-street, S.W.1, the following revised B.S. Specification for Lightly Insulated Cleat Wire for Use On Insulating Cleats (B.S. No. 1,096—1944). Price 6d., post free.

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NEW TOWNS FOR OLD

MR. J. S. ALLEN'S SUGGESTIONS.

SPEAKING on "New Towns for Old" to the Leeds Luncheon Club, at the Hotel Metropole, Leeds, on Monday, June 19, Mr. J. S. Allen, head of Leeds School of Architecture and Planning, advocated a system of precincts for various sides of city life. Mr. O. A. Radley, the Town Clerk, was in the chair.

"The central areas of most of our towns, and particularly of the industrial north, are not unlike outworn machines," said Mr. Allen. "They are inefficient and costly to run, but none of us cares to face the cost of capital replacement.

"The problem of planning a central area is much more complicated than that of planning a new garden city or housing estate. Outstandingly important is the problem of communications. Twentieth-century communications in towns are very badly choked. The street, as we find it to-day, has not only to provide access for traffic, but light and air for our buildings and, underneath it, water, electricity, gas, and so on. It is unfair to ask the street to do all this, and I think the first step is to clear certain of our streets for transport with the minimum of interference by crossings.

"As far as possible, let us remove industry from too close contact with the residential area, and let us ensure that industry is not objectionable to its neighbour. Let us consider placing commerce in its own precinct, so that the business of the city can be conducted in its own area without interference. I would like to see our educational centres grouped more happily together, so that interchange of ideas would be simpler. The civic centre and administration area would be in its own precinct. Whether you would consider carrying the idea farther, and making shopping streets closed to wheeled traffic, I am not certain.

"Our own Bond-street could be redesigned so that pavement and road could form one broad pedestrian way. How much pleasanter to meet one's friends, and to be free to change over from one side to the other without interfering with motorists!

"Many of us look forward to a great renaissance in religion. Would it not be possible and advisable that a great city should have its own religious centre? Perhaps a group of buildings or, if you would care, one building which would represent the religious fervour and outlook of our own time. That religious centre might have to be placed not so far away from our educational centre."

Mr. Allen said that it was clearly impossible to carry out the proposals at once, but that since enormous changes would take place in the coming years, adequate preparations should be made now. A period plan by which work would be carried out in order of priority and urgency would prove economical in the long run.

He also urged more careful consideration of architectural planning, and pointed out that the greatest architecture could only be produced from a great city plan. A tragedy of this century was the costliness of planning good buildings on wrong sites.

"Reconditioning England" Exhibition.

A "RECONDITIONING ENGLAND" exhibition, arranged by a number of organisations in collaboration, was to have been opened at the St. Martin's School of Art, 109, Charing Cross-road, W.C.2, in April last, but had to be postponed. We learn that the Exhibition will now be open from July 24 to August 7, and that a very interesting list of lectures has been arranged. Miss E. Bright Ashford (British Museum, W.C.1) is the honorary secretary.

IN PARLIAMENT

The Uthwatt Report.

MR. PARKER asked the Minister of Town and Country Planning on how many occasions had representatives of land and property owners been received by Ministers or officials on the subject of the main recommendations of the Uthwatt Committee.

MR. STRAUSS said that neither the Minister nor his officials had received any representatives of land and property owners on this subject.

MR. PARKER asked the Minister of Town and Country Planning on how many occasions had members of the Uthwatt Committee been consulted on methods by which the difficulties advanced against their main recommendation could be overcome.

MR. STRAUSS: My right hon. friend has not consulted members of the Uthwatt Committee on this matter.

Small Builders.

MR. BOSSOM asked the Minister of Health whether he was aware that a large number of operatives in the building industry gained their experience by working for small builders; and would he for this reason support the principle that smaller builders be given the maximum consideration for post-war building work, to help to develop our building trades army at the earliest possible moment.

MR. WILLINK: Yes, sir, and I anticipate that as soon as it is possible to resume house-building there will be ample scope for the small builder.

MR. BOSSOM: Would the Minister really make a great effort in this direction, because the small builders train their workers more than the larger ones?

MR. WILLINK: I have said repeatedly that I place very great importance on the work of the small units.

MR. HOPKINSON: Is the right hon. gentleman not powerless in this matter inasmuch as the Ministry of Works has absolute control of all the material required?

MR. WILLINK: No, sir.

MR. ASTOR asked the Minister of Health whether he intended to allow authorities, who had grouped for the purpose of preparing sites for houses, to split up their group and obtain tenders in the normal manner.

MR. WILLINK repeated that the scheme was a voluntary one and no local authority could be compelled to join a group against its will. The Government believed, however, that in present circumstances, grouping was the most efficient and economical method of doing this work, and that the tenders when received would demonstrate that it was to the financial advantage of local authorities to participate in the grouping scheme.

MR. ASTOR: If they exercise their option to split up, will they still be able to obtain priorities for machinery and labour?

MR. WILLINK: That depends on whether the particular proposal is one which is both efficient and economical.

Replanning of London.

CAPTAIN STRICKLAND asked the Minister of Town and Country Planning whether a report on the planning of the London Regional Area was now being prepared by Professor Abercrombie; if so, when it would be published; and whether any other scheme for the planning of that area was under consideration by his Ministry.

MR. H. STRAUSS: Professor Abercrombie was appointed in 1942 to prepare an outline plan and report for the area surrounding London so as to form, with the plans of the City and County of London, which were already being prepared, a comprehensive plan for the whole region. He has completed his plan and report, which are now in the Minister's hands. They will be published as soon as practicable, but I cannot yet give the date of publication. I am not aware of any other plan covering the whole area.

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND

THE 28th annual convention of the Incorporation was held in Edinburgh on June 2, when Mr. J. R. McKay, F.R.I.B.A., was re-elected President.

Messrs. J. Shearer, Frank R. Burnet, and James Wood were elected to represent the Incorporation on the R.I.B.A. Council, and Sir Ian MacAlister was elected to the Honorary Fellowship.

The anual report shows that present membership is 1,291. The Incorporation has decided to support the formation of a Scottish Construction Council representative of all associations interested in constructional work in Scotland.

In his speech to the convention, the PRESIDENT said that in any scheme for physical reconstruction we required, first, the National Plan; second, the Regional Plan; and last, the local authority's plan. "It is a matter of national concern that we are still without this plan from the Ministry of Town and Country Planning and its Scots counterpart. It is fundamental to the future development of every city, burgh, village or housing scheme and its delay will cause many adaptations and alterations to plans already being prepared by local authorities." The national plan showing the transport life lines being prepared by the R.I.B.A. through the Allied Societies would soundly demonstrate that architects had the vision for planning nationally as well as for planning and executing single houses or industrial or commercial premises. As to housing, provision should be made in the layout for all classes of houses—including emergency houses, long and short date houses—all aesthetically related so that the roads and services remained and only the house would go out of date and need modernising.

SHEFFIELD REPLANNING

THE MANZONI SCHEME CRITICISED.

AN evaluation of the Manzoni "M" scheme for the replanning of the central area of Sheffield has been prepared by the Sheffield, South Yorks and District Society of Architects and Surveyors, by whose council it has been considered and approved. The memorandum is highly critical of the scheme, which it describes as "traffic planning not without errors of judgment and faults. . . . It reveals not only a lack of appreciation of the other aspects of town planning but displays a very elementary knowledge of the principles of civic design, especially of the layout and arrangement of buildings. Frankly, the Central area has been considered not as a place in which to live agreeably and to transact business, but as a place in which all forms of transport will be able to travel from one side to another with rapidity." The design was illustrated in *The Builder* for June 16.

Criticism is especially levelled at the suggested viaduct from the Wicker to connect with the city circle, which is said to cut across both the high and low ground in the central area with little consideration for contours. The viaduct is said to have a gradient steeper than the maximum gradient of 1 in 30 recommended for bridges, and it is further stressed that "a viaduct can never be said to be other than an elaborate, costly and, from some aspects, a wasteful solution of a traffic problem." The plan, which is criticised at many other points, is summed up as one which "gives too many hostages to fortune, and creates too many impediments to a great enterprise to be adopted even in principle."

"ROD, I."

W.D. COMMISSION'S THANKS TO NATIONAL FEDERATION.

THE National Federation of Building Trades Employers has received a cordial letter of thanks from the War Damage Commission for its assistance in the preparation of the new pamphlet on war damage repairs. According to the Foreword to the pamphlet, which is "issued by the War Damage Commission in agreement with the National Federation of Building Trades Employers," discussions with the National Federation produced "comprehensive proposals for a national basis for 'proper cost.'"

In its letter the Commission expresses its appreciation of the contribution made by the Federation's representatives "during the long and inevitably intricate negotiations now happily concluded" and records the indebtedness of all present at the meetings to Mr. Howard Close, the Federation's Legal Adviser, and to the frank and unstinting help given by the committee's chairman, Mr. Clifford Trollope, and all his colleagues.

After detailing the various stages of the negotiations, which were begun in June of last year, the letter concludes: "It is agreed that any negotiations of principle or general application arising upon the interpretation of the agreement shall be discussed between our respective headquarters before the Commission gives any final decision, and that we will proceed at once to discuss further with you the possibility of modifying our present procedure as to the settlement of disputes." The members of the committee, in addition to Mr. Trollope, were Mr. A. H. Adamson, Mr. Norman Longley, Mr. Fred Pugsley and Mr. V. Theo. Williams.

New Directorship.

The directors of Ragusa Asphalte Paving Co., Ltd., announce that Major Owen Hart, D.S.O., has been elected to the board of directors of the company and will take up an executive position forthwith.

LAW REPORT

JOINER'S UNSUCCESSFUL CLAIM AGAINST EMPLOYERS FOR PERSONAL INJURIES BY CIRCULAR SAW.

COURT OF APPEAL.

Before LORDS JUSTICES SCOTT, LUXMOORE and GODDARD.

Miller v. William Boothman & Sons, Ltd.

This case, which raised the question whether a circular saw, being a dangerous machine, had been securely fenced in accordance with the provisions of the Factories Act, 1937, came before the Court on the appeal of the plaintiff, Mr. Arthur Miller, a joiner, of Bankhouse-street, Barrowford, Lancashire, from the judgment of Mr. Justice Stable, at Manchester Assizes dismissing the action which the appellant brought against the defendants, Messrs. William Boothman & Son, Ltd., sawmill proprietors, of Spring Bank Saw Mills, Nelson, Lancs, to recover damages for personal injuries he had sustained whilst in the employment of the defendants, the respondents in the present appeal.

The appellant's case was that on the day of the accident, while cutting up timber by means of a circular saw, his thumb got caught, and as a consequence was seriously injured. Appellant alleged that the accident was caused through the failure of the employers securely to fence the saw, and therefore they had been guilty of a breach of statutory duty under the provisions of Section 14 (1) of the Factories Act, 1937.

The defence was a denial of any breach of statutory duty and a plea that the appellant had in the circumstances been guilty of contributory negligence.

Mr. Justice Stable, after hearing the evidence at the trial, decided that there had been no contributory negligence by the appellant, but found at the same time that in the circumstances there was not an absolute obligation on the employers securely to fence dangerous machinery of the character in question in the present case, and he accordingly decided the case in favour of the employers and dismissed the action, and against this result Mr. Miller now appealed.

The Court dismissed the appeal.

Lord Justice Goddard, who delivered the judgment of the Court, said that if Section 14 of the Act of 1937 stood alone, the obligation to fence securely dangerous machinery would be absolute. The object of that section was to secure safety, and not merely to provide an injured workman with a cause of action. The Secretary of State was given power to direct the use of a particular sort of guard or device if he considered it desirable, to eliminate, as far as it was humanly possible to do so, the risk of an accident. The object of the Legislature in conferring that power on the Secretary of State to modify the provisions of the Act would seem to be that it recognised there were some machines necessary for modern industry which could not be completely fenced if they were to be used, and circular and band saws were good illustrations. It was not disputed that the saw in question complied with the Woodworking Machinery Regulations which the Secretary of State made in 1922, and which were in force now. As in the opinion of the Court the Secretary of State had power to make those regulations, and that the saw in question complied with those regulations, it followed that in the circumstances there had been no breach of a statutory duty by the defendants, and that the appeal failed and would be dismissed.

Mr. H. Burton appeared for appellant, and Mr. E. Rowson for respondents.

SOUTH-WESTERN EMPLOYERS

DIVISIONAL ASSOCIATION FOR WILTSHIRE.

A WILTSHIRE Divisional Association of the South-Western Federation of Building Trades Employers, one of the ten Regional Federations of the National Federation, has been formed as the result of a meeting of the builders of the county in Devizes. Mr. William J. Rendell, of Devizes, has been elected Chairman, and Mr. G. E. Beard, of Swindon, Vice-chairman. The county was well represented at the meeting, builders attending from Calne, Chippenham, Devizes, Durrington, Marlborough, Salisbury, Swindon and Westbury.

After a full discussion of the aims and objects of the new association, a divisional committee was appointed, consisting of Messrs. A. Chivers (Devizes), E. A. G. Hannah (Chippenham), J. Holdaway (Westbury), H. C. James (Salisbury), and A. H. Pope (Swindon).

The South-Western Federation has recently been reorganised and very largely decentralised, and Wiltshire has joined with Dorset and Somerset, under the chairmanship of Mr. G. W. Grosvenor, of Bath, to form Area No. 2 of the Region

One of the objects of the Association will be to ensure that local firms are given a fair chance of competing for local work, and it has already taken active steps to this end in connection with the advance preparation of housing sites.

The Secretary of the Wiltshire Association is Mr. R. J. Hunt, of Crow-hill, Limpley Stoke, Bath.

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SAVINGS IN THE BUILDING INDUSTRY

APPEAL TO ALL EMPLOYERS TO CO-OPERATE.

MR. W. T. CRESWELL, K.C., Honorary Secretary of the War Savings Committee of the Building, Civil Engineering and Allied Trades, was the guest of the Council of the National Federation of Building Trades Employers at its June meeting last week. Mr. J. G. Gray presided.

Appealing to members to support the war savings movement, Mr. Creswell said that records showed that where the building employer took a real interest in the savings movement results were highly satisfactory, in many cases rising to between 5 per cent. and 6 per cent. of the wages paid each week—a very gratifying figure. But not all building firms took the same interest in the matter, and it was for that reason that he was appealing to employers in the building and civil engineering industries to increase their efforts. War savings were vital to-day and would be urgently wanted after the war, and it was important from both the national and the personal point of view that maximum support should be given to the campaign.

BOOK REVIEW

Descriptive Geometry for Architects and Builders. By LESLIE A. LEE and R. FRASER REEKIE. London: Edward Arnold & Co. Price 7s. 6d. net.

The aim of this book is to provide a sound knowledge of the principles of geometry and geometrical drawing and their various practical applications for those preparing for or engaged in the building industry. In this aim the authors have succeeded admirably. The whole subject of plane and solid geometry is dealt with in a practical and interesting way. The chapter on orthographic projection, for example, covering plans, elevations and sections, and isometric, axonometric and oblique projection, is one of particular value to the architectural draughtsman. The illustrations and diagrams, which include many useful examples of current building practice, are admirably clear and simple in their draughtsmanship, and the accompanying text is consistent in its brevity and clearness. Examination questions of representative institutions are given at the end of the book. The authors are to be congratulated on the production of a most useful textbook.

Books Received.

SURFACE DRAINAGE. By L. B. ESCRITT. A.M.Inst.C.E. (Bognor Regis: John Crowther, Ltd.) Price 10s. 6d. net.

SIMPLE EXAMPLES OF REINFORCED CONCRETE DESIGN. Third edition. By Dr. Oscar Faber. (Oxford University Press.) Price 6s. net.

REINFORCED CONCRETE SIMPLY EXPLAINED. Third edition. By Dr. Oscar Faber. (Oxford University Press.) Price 6s. net.

ELEMENTARY PRINCIPLES OF BRICKWORK CONSTRUCTION. Vol. I. By J. G. V. Proudman, L.I.O.B., A.M.C.T. (London: Chapman and Hall, Ltd.) Price 7s. 6d. net.

Exhibition at Leeds.

The English Joinery Manufacturers' Association (Incorporated) is showing a range of E.J.M.A. kitchen fixtures and also a sample E.J.M.A. standard wood casement window at the "Homes of To-morrow" Exhibition which, organised by the *Yorkshire Evening News*, is now being held at Lewis's Stores, Leeds.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 8th APRIL, 1944

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	2/0	1/7	Cleveleys	2/0	1/7	Isle of Thanet	1/10	1/5½	Saxmundham	1/8½	1/4½
Aberdare	2/0	1/7	Clitheroe	2/0	1/7	Isle of Wight	1/9½	1/5	Scarborough	1/11½	1/6½
Abergavenny	1/10½	1/5½	Cobham (Surrey)	1/11	1/6½	Keighley	2/0	1/7	Scunthorpe	2/0	1/7
Abingdon	2/0	1/7	Colchester	1/11½	1/6½	Kenilworth	2/0	1/7	Selby	2/0	1/7
Accrington	2/0	1/7	Colwyn Bay	1/11	1/6½	Kettering M.B.	2/0	1/7	Sevenoaks	1/10½	1/5½
Aldeburgh	1/8½	1/4½	Congleton	1/11½	1/6½	Kidderminster M.B.	1/11½	1/6½	Sheerness	1/10	1/5½
Aldershot	1/10½	1/5½	Coventry C.B.	2/0	1/7	King's Lynn	1/10	1/5½	Sheffield	2/0	1/7
Alfreton U.D.	2/0	1/7	Cranbrook	1/10	1/5½	Kirkham	2/0	1/7	Shipley	2/0	1/7
Alnwick	1/11½	1/6½	Cranleigh	1/10	1/5½	Knowle	1/11½	1/6½	Shoeburyness	1/11½	1/6½
Altrincham	2/0	1/7	Crawley	1/10	1/5½	Lancaster	2/0	1/7	Shoreham	1/11	1/6½
Amble	1/11½	1/6½	Crewe	1/11½	1/6½	Leamington M.B.	2/0	1/7	Shrewsbury M.B.	1/11½	1/6½
Amersham	1/10½	1/5½	Cromer	1/9	1/4½	Leatherhead	1/11	1/6½	Sittingbourne	1/10	1/5½
Ammanford	2/0	1/7	Crowborough	1/10	1/5½	Leeds	2/0	1/7	Skegness U.D.	1/11	1/6½
Andover	1/10	1/5½	Cuckfield	1/10	1/5½	Leicester C.B.	2/0	1/7	Sleaford U.D.	1/10½	1/5½
Ardingly	1/10	1/5½	Darlington	2/0	1/7	Leighton Buzzard	1/9	1/4½	Slough	1/11	1/6½
Arundel	1/10	1/5½	Darwen	2/0	1/7	Letchworth	1/11	1/6½	Smethwick	†2/0	†1/7
Ascot	1/10	1/5½	Daventry M.B.	1/10½	1/5½	Lewes	1/10	1/5½	Southampton	1/11½	1/6½
Ashby-de-la-Zouch U.D.	2/0	1/7	Deal	1/10	1/5½	Lichfield M.B.	1/11	1/6½	Southend-on-Sea	1/11½	1/6½
Ashford (Kent)	1/10	1/5½	Denbigh Town	1/11	1/6½	Lincoln C.B.	2/0	1/7	Southport	2/0	1/7
Ashford (Middlesex)	2/0	1/7	Derby C.B.	2/0	1/7	Littlehampton	1/10	1/5½	South Shields	2/0	1/7
Ashington	1/11½	1/6½	Devizes	1/9	1/4½	Liverpool	‡2/1	¶	Spalding	1/10	1/5½
Ashtead	2/0	1/7	Dewsbury	2/0	1/7	Llandudno	1/11	1/6½	Stafford M.B.	1/11½	1/6½
Ashton-under-Lyne	1/10	1/5½	Didcot	1/10	1/5½	Llanelly	2/0	1/7	Staines	1/11	1/6½
Aylesbury	2/0	1/7	Diss	1/8½	1/4½	London—			Stamford M.B.	1/11	1/6½
Aylsham	1/9	1/4½	Doncaster	2/0	1/7	12m. radius	2/1½	1/8	Stevenage	1/11	1/6½
Bagshot	1/10	1/5½	Dorchester	1/9½	1/5	12-15m. radius	2/1	1/7½	Stockport	2/0	1/7
Banbury	1/10	1/5½	Dorking	1/10½	1/5½	Long Eaton U.D.	2/0	1/7	Stockton-on-Tees	2/0	1/7
Barnsley	2/0	1/7	Dover	1/10	1/5½	Longton	2/0	1/7	Stoke-on-Trent C.B.	2/0	1/7
Barnstaple	1/10	1/5½	Dovercourt	1/10	1/5½	Loughborough M.B.	2/0	1/7	Stourbridge M.B.	2/0	1/7
Barrow-in-Furness	2/0	1/7	Driffield	1/10½	1/5½	Louth M.B.	1/10½	1/5½	Stourport U.D.	1/11½	1/6½
Barry	2/0	1/7	Droitwich M.B.	1/11½	1/6½	Lowestoft	1/10	1/5½	Stowmarket	1/9	1/4½
Basingstoke	1/10	1/5½	Dudley M.B.	2/0	1/7	Luton	1/11½	1/6½	Stratford-on-Avon M.B.	1/11	1/6½
Bath	1/11½	1/6½	Dunstable	1/10½	1/5½	Macclesfield	1/11½	1/6½	Stroud	1/11	1/6½
Batley	2/0	1/7	Durham City	2/0	1/7	Maidenhead	1/11	1/6½	Sunderland	2/0	1/7
Beaconsfield	1/10½	1/5½	Eastbourne	1/11	1/6½	Maidstone	1/10½	1/5½	Sutton Coldfield M.B.	2/0	1/7
Beccles	1/8½	1/4½	E. Glam. (Mon. Val.)	2/0	1/7	Malvern U.D.	1/10½	1/5½	Swaffham	1/8½	1/4½
Bedford	1/11½	1/6½	East Grinstead	1/10	1/5½	Manchester	2/0	1/7	Swanage	1/10	1/5½
Berkhamsted	1/10	1/5½	Edenbridge	1/10	1/5½	Manningtree	1/9	1/4½	Swansea	2/0	1/7
Berwick	1/11½	1/6½	Ely	1/9	1/4½	Mansfield M.B.	2/0	1/7	Swindon	1/10½	1/5½
Bewdley	2/0	1/7	Epping	2/0	1/7	March	1/9	1/4½	Tamworth M.B.	1/11½	1/6½
Bexhill	1/10½	1/5½	Exeter	1/11½	1/6½	Margate	1/10	1/5½	Taunton	1/10½	1/5½
Bideford	1/10	1/5½	Exmouth	1/10½	1/5½	Market Harborough	1/11	1/6½	Tenterden	1/10	1/5½
Biggleswade	1/10	1/5½	Fakenham	1/9	1/4½	Matlock U.D.	1/10½	1/5½	Thames Haven	2/0	1/7
Billericay	1/9½	1/5	Falmouth	1/10½	1/5½	Melton Constable	1/8½	1/4½	Thetford	1/9½	1/5
Birchington	1/10	1/5½	Fareham	1/11	1/6½	Melton Mowbray	1/11	1/6½	Thorpe Bay	1/11½	1/6½
Birkenhead	‡£2/1	¶	Faversham	1/10	1/5½	Merthyr	2/0	1/7	Todmorden	2/0	1/7
Birmingham C.B.	†2/0	†1/7	Felixstowe	1/11	1/6½	Middlesbrough	2/0	1/7	Tonbridge	1/10½	1/5½
Bishop Auckland	2/0	1/7	Filey	1/10½	1/5½	Middleton	2/0	1/7	Torquay	1/11½	1/6½
Bishop's Stortford	1/11	1/6½	Fleetwood	2/0	1/7	Middlewich	1/11½	1/6½	Totnes	1/10	1/5½
Blackburn	2/0	1/7	Flint	2/0	1/7	Milford Haven	1/10½	1/5½	Trowbridge	1/9	1/4½
Blackpool	2/0	1/7	Folkestone	1/10	1/5½	Morecambe	2/0	1/7	Truro	1/9½	1/5
Blyth	2/0	1/7	Frinton-on-Sea	1/10	1/5½	Morley	2/0	1/7	Tunbridge Wells	1/10½	1/5½
Bognor Regis	1/10	1/5½	Frome	1/9	1/4½	Mundesley	1/9	1/4½	Uppingham (Salop)	1/11½	1/6½
Bolton	2/0	1/7	Gainsborough U.D.	1/11	1/6½	Nantwich	1/11½	1/6½	Uttoxeter U.D.	1/10½	1/5½
Bournemouth	1/11	1/6½	Gateshead	2/0	1/7	Nelson	2/0	1/7	Wakefield	2/0	1/7
Bracknell	1/10	1/5½	Gillingham (Kent)	1/11	1/6½	Newark-on-Trent	1/11½	1/6½	Walsall C.B.	2/0	1/7
Bradford	2/0	1/7	Glossop	2/0	1/7	Newbury	1/10	1/5½	Walsden	2/0	1/7
Bradford-on-Avon	1/9	1/4½	Gloucester	1/11½	1/6½	Newcastle-on-Tyne	2/0	1/7	Walton-on-Naze	1/10	1/5½
Braintree	1/10	1/5½	Godalming	1/10	1/5½	Newcastle-u.-Lyme	2/0	1/7	Ware	1/11½	1/6½
Brentwood	1/11½	1/6½	Goole	2/0	1/7	New Forest	1/10	1/5½	Warminster	1/9	1/4½
Bridgwater	1/10½	1/5½	Gosport	1/11½	1/6½	Newmarket	1/10	1/5½	Warrington	2/0	1/7
Bridlington	1/11½	1/6½	Grantham M.B.	1/11	1/6½	Newport, Mon.	2/0	1/7	Warwick M.B.	2/0	1/7
Brighouse	2/0	1/7	Gravesend	1/11½	1/6½	Newport Pagnell	1/10	1/5½	Wellington R.D.	1/11½	1/6½
Brighton	1/11	1/6½	Great Yarmouth	1/10	1/5½	Northampton C.B.	2/0	1/7	Welwyn	1/11	1/6½
Bristol	2/0	1/7	Grimsby	2/0	1/7	Norwich	2/0	1/7	Welwyn Gar. City	2/0	1/7
Broadstairs	1/10	1/5½	Guildford	1/10	1/5½	Nottingham	2/0	1/7	Wells (Norfolk)	1/8½	1/4½
Bromsgrove U.D.	1/11½	1/6½	Guilsborough	1/10½	1/5½	Nuneaton	1/10½	1/5½	West Bromwich C.B.	2/0	1/7
Buckley	2/0	1/7	Halifax	2/0	1/7	Oakham U.D.	2/0	1/7	Westcliff-on-Sea	1/11½	1/6½
Bungay	1/8	1/4	Hanley	2/0	1/7	Oldham	2/0	1/7	Weston-super-Mare	1/11	1/6½
Burnham-on-Crouch	1/8½	1/4½	Harpenden	1/11	1/6½	Ormskirk	1/11½	1/6½	Weybridge	1/11	1/6½
Burnley	2/0	1/7	Harrogate	2/0	1/7	Oxford	1/10½	1/5½	Weymouth	1/10	1/5½
Burslem	2/0	1/7	Hartlepools	2/0	1/7	Oxted	1/11½	1/6½	Whitby	1/11	1/6½
Burton-on-Trent C.B.	2/0	1/7	Harwich	1/10	1/5½	Paignton	1/10	1/5½	Whitstable	1/10	1/5½
Bury	2/0	1/7	Haslemere	1/10	1/5½	Peterborough (Borough)	1/11½	1/6½	Widnes	2/0	1/7
Bury St. Edmunds	1/9½	1/5	Hastings	1/10	1/5½	Plymouth	2/0	1/7	Wigan	2/0	1/7
Buxton	1/11½	1/6½	Hatfield	1/11½	1/6½	Pontefract	2/0	1/7	Wigton	1/10½	1/5½
Byfleet	1/10½	1/5½	Haywards Heath	1/10	1/5½	Pontypridd	2/0	1/7	Willington	2/0	1/7
Cambridge	2/0	1/7	Hednesford	1/11½	1/6½	Port Talbot	2/0	1/7	Wilmslow	2/0	1/7
Canterbury	1/10	1/5½	Hemel Hempstead	1/11	1/6½	Portsmouth	1/11½	1/6½	Winchester	1/10½	1/5½
Cardiff	2/0	1/7	Henley-on-Thames	1/10	1/5½	Preston	2/0	1/7	Windermere	1/10½	1/5½
Carlisle	2/0	1/7	Herne Bay	1/10	1/5½	Pulborough	1/10	1/5½	Windsor	1/11	1/6½
Carnforth	2/0	1/7	Hertford	1/11½	1/6½	Ramsgate	1/10	1/5½	Wisbech	1/9½	1/5
Castleford	2/0	1/7	Heysham	2/0	1/7	Reading	1/11½	1/6½	Witham	1/10	1/5½
Caterham	2/0	1/7	Hitchin	1/11	1/6½	Redditch U.D.	1/11½	1/6½	Woking	1/10½	1/5½
Chard	1/9	1/4½	Hoddesdon	1/11½	1/6½	Redhill	1/10½	1/5½	Wokingham	1/10	1/5½
Chatham	1/11	1/6½	Holt (Norfolk)	1/8½	1/4½	Ripon	1/10½	1/5½	Wolverhampton C.B.	2/0	1/7
Chelmsford	1/11½	1/6½	Horley	1/10	1/5½	Rochdale	2/0	1/7	Woodbridge	1/9½	1/5
Cheltenham	1/11	1/6½	Horsham	1/10	1/5½	Rochester	1/11	1/6½	Worcester C.B.	1/11½	1/6½
Chepstow	1/11½	1/6½	Horwich	2/0	1/7	Rugby M.B.	2/0	1/7	Workington	1/10½	1/5½
Chertsey	1/11	1/6½	Huddersfield	2/0	1/7	St. Albans	1/11½	1/6½	Worksop	1/11½	1/6½
Chester	2/0	1/7	Hull	2/0	1/7	St. Helens	2/0	1/7	Worthing	1/10	1/5½
Chesterfield M.B.	2/0	1/7	Hunstanton	1/9	1/4½	St. Neots	1/9½	1/5	Wrexham	1/11½	1/6½
Chichester	1/10	1/5½	Huntingdon	1/9½	1/5	Saffron Walden	1/9	1/4½	Wycombe	1/11	1/6½
Chorley	2/0	1/7	Ilfracombe	1/10	1/5½	Salisbury City	1/9½	1/5	Wymondham	1/9	1/4½
Cirencester	1/9½	1/5	Ingatestone	1/10½	1/5½	Salisbury Plain	1/11	1/6½	Yeovil	1/10½	1/5½
Clacton	1/10	1/5½	Ipswich	1/11½	1/6½	Sawbridgeworth	1/10½	1/5½	York	2/0	1/7

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/6½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the basic rate of wages for women engaged on craft processes is 1/6½ per hour after the conclusion of a probationary period of three months. During the probationary period the rate of wages is first month 1/0½ per hour, second month 1/2½ per hour, and third month 1/4½ per hour. For all women carrying out work other than on craft processes, 1/3 per hour.

For Building Trade Wages in Scotland, see page 17

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 16 0
Second Hard Stocks	4 9 0
Mild Stocks	3 16 0
Single Rough Stocks	3 10 0
Common Stocks	3 0 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

	London Rated Stations	Site in London Area, North of Thames
2½ in. Phorpres. A discount of 6d. 1,000 only per 1,000 monthly account.	£ s. d.	£ s. d.
Pressed	58 3	68 3
Keyed	60 3	70 3
Single Bullnose	78 3	88 3
Rustics	78 3	88 3
Whites	78 9	88 3
	£ s. d.	
Best blue Pressed Staffs. (London Stns.)	11 12 0	
Do. Bullnose (London Stns.)	12 2 0	
Blue Wire Cuts (London Stns.)	10 9 6	

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 10 0 0	3 in. 12 0 0

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed Stretcher	30 0 0	D'ble Str'tch'rs	38 10 0
		D'ble Headers	35 10 0
Headers	29 10 0	One side&two ends	39 10 0
Quoins, Bullnose and 4½in.Flats	36 10 0	Two sides&one end Splays and Squints	40 10 0
			38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

ADD LEVY ON BRICKS, 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.
HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	2 8
2½ " " 110 "	2 11
3" " " 103 "	3 6
4" " " 84 "	4 0

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup.	1 11	3" per yd. sup.	2 6
2½ " "	2 3	4" " "	3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½ " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	4 0

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 8	12" x 9" x 3"	3 6
12" x 9" x 2½"	2 11	12" x 9" x 4"	4 0

Per yard super d/d. Free on site, London.
Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. per ft. cube	4 7
Do. do. delivered on road waggons as above stations per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto "	1 4½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappled random blocks .. per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) "	3 5
3 in. ditto ditto "	2 8
2 in. self-faced random flags .. per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 7s. 6d. Moulded, 8s. 6d.
Small section cills and copings, 11s.

SAND.

Thames Ballast	11s. 6d. per yd.	
Pit Ballast	10s. 0d. " "	delivered 2 miles radius Padding-ton.
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¾ in. Shingle	10s. 6d. " "	
¾ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

	£ s. d.
Best British Portland Cement. Standard Specification, delivered London area.	
6 ton loads and upwards site .... per ton	2 11 0
1 to 6 tons site	2 14 0
Alongside Vauxhall in 80-ton lots	2 8 6
" Ferrocrete " Rapid Hardening Cement—	
6 ton loads and upwards site	2 17 0
1 to 6 tons site	3 0 0
Alongside Vauxhall in 80-ton lots	2 14 6
" Aquacrete " Water Repellent, " Blue Circle" cement, 30s. per ton on ordinary " Blue Circle " prices.	
" Colorcrete " Nos.1 and 2. Coloured rapid Hardening Portland Cement in 6 ton lots	4 11 0
" Colorcrete " not rapid hardening, accord-to colour, from £7 to £15 10s. per ton.	
" Snowcrete " White Portland Cement (in free paper bags)	11 5 0
Under one ton .. .. .. per cwt.	0 13 2
" 417 " Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 tons lots and upwards	3 11 0
Plus packages at current prices.	
Super Cement (Waterproof), bags extra.	4 1 0

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.
Less than one ton 1s. 9½d. nett each.
Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene'sCement, White 7 0 0
Parian Cement 7 0 0	" " Pink 6 10 0

Cementone Colours for cement according to tints, per cwt. from £3 5s. 0d.

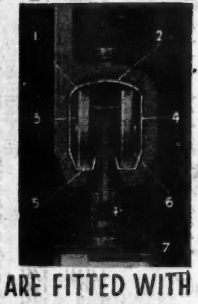
SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	45 5 0	18 by 10	24 0 6
22 by 12	37 17 6	16 by 9	22 12 0
22 by 11	34 2 6	16 by 10	21 10 6
20 by 12	33 0 0	16 by 8	16 12 6
20 by 10	30 5 0		

KING

1 King-Alloy Rolled Steel Section.
2 Domed Top Sheds All Moisture.
3 Correct Trolley Clearance.
4 Anti-Rust Finish.
5 Flat Running Treads For Long Life.
6 Lateral Movement For Easy Running.
7 Tecalemit Pressure Lubrication.



IF YOUR DOORS ARE FITTED WITH
KING DOOR TRACK
THEY ARE ALWAYS RUNNING IN
TIP TOP GEAR
GEO. W. KING LTD
HARTFORD WORKS HITCHIN HERTS
PHONE HITCHIN 960 (10 LINES)

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 2 6	Sirapite, Coarse	4 11 6
" White	4 10 0	" Finish	4 19 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	3 7 6	Grey Stone Lime	3 1 0
		Chalk Lime	3 1 0
Granite Chippings	2 0 0	Hair per cwt.	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12s. 6d. 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£6 12 9
Ditto hand-made ditto	7 19 9
Ornamental ditto	8 7 0
Hip and valley tiles—Hand-made	16 4
(per dozen) —Machine-made	15 7

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	Foot cube. £ s. d.
Dry English Wainscot Billets	16 0 to 0 18 0
Dry Slavonian Billet Wainscot	17 0 to 1 0 0
Dry Cuba Mahogany logs	21 0 to 1 4 0
Square-edged Honduras Mahogany	0 16 6
Log Cut Honduras Mahogany	0 17 6
American Figured Oak	0 13 0
American Plain Oak	0 12 6
Jap. Figured Oak	0 13 0
Jap. Plain Oak	0 12 6
Teak	0 15 6
American Whitewood	0 12 6
African Whitewood	0 8 0
African Mahogany	0 11 0
Australian Walnut	0 19 0
Australian Silky Oak	0 12 6
Best Scotch glue per cwt.	5 0 0
Liquid glue per gallon	1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes		
2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.
PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	71 0 0
	Per square. s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.

	per square. s. d.
⅜ in.	40 0
½ in.	45 3
⅝ in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/-	51/- per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
50/-	72/- per doz.

S.D. STOP COCKS FOR IRON.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
33/-	48/-	86/-	209/-	281/-	456/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
45/-	77/6	123/-	240/-	372/-	624/- per doz.

DOUBLE NUT BOILER SCREWS.

¼ in.	⅜ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/-	24/-	36/-	56/- per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
72/-	115/-	144/-	288/-	384/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/-	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/9	13/6	25/-	37/-	46/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ × 6 lbs.	1½ × 6 lbs.	2 × 7 lbs.	3 × 7 lbs.
Lead P.	26/-	34/-	55/-	92/- per doz.
Lead S.	34/-	41/-	67/-	115/- per doz.

SOLDER.—Plumbers', 1/7. Tinmen's, 2/1. Blow pipe 2/6 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£24	0	0
Plain Compound Girders	26	10	0
Stanchions	29	0	0
In Roof Work	35	0	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	23	5	0	½ in.	21	15	0
⅜ in.	22	15	0	⅝ in. to 2¾ in.	21	5	0
½ in.	22	5	0				

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

10/17

	Tubes. ¼"/6"	Tubulars, ¼"/6"	and 19/24"	Flanges. ¼"/2"	2½"/6"
	%	%	%	%	%
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ¼"/⅛" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34, 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.G. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE,

cwt. qr. lbs. in 9 fts.	per yard.	Bends.	Branches.
3 in. 0 3 14	6/0	7/3	11/6
4 in. 1 1 17	8/7	8/2	14/5
5 in. 1 2 18	10/7	14/9	22/3
6 in. 2 0 1	12/9	17/0	29/8

Gaskin, 75/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	18	7	6
IRON.—Staffordshire Marked Bars	19	7	6
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0
Ex Merchant's Stock, per ton (two-ton lots).			
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0
	Per ton £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil (5 galls.) per gallon	0	7	0
Boiled Linseed Oil (5 galls.) "	0	7	4
Genuine Ground English White Lead, per cwt.	3	11	9
Genuine White Lead Paint, 14-lb. tins free, per cwt.	4	16	6
Genuine Red Lead "	2	18	6
Linseed Oil Putty (Kegs extra) "	1	5	3
Utility Putty (Packages returnable) "	1	3	9
Size, XD quality ..... †kn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/0½	2/0	1/11½	1/11	1/10½	1/10
Labourers	1/7	1/6½	1/6½	1/6	1/5½	1/5½

Aberdeen	A	Dumfriesshire	A2	Inverness	*	Perthshire	A2
Ayrshire	A	Dundee	A	Inverurie	A1	Peterhead	A1
Banff	B	Dunoon	A	Kincardineshire	A2	Renfrewshire	A
Berwickshire	A2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A2
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A2
Doune	A	Forfarshire	A2	Moray and Nairn	B	Stewartry	A2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A2	Stornoway	A2
Dumfries	A1	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

*This town has its own rates: Masons, 1/9½; Carpenters, 1/9½; Slaters, 1/9½; Plumbers, 1/10; Plasterers, 1/10½ but 1/11 is paid owing to the scarcity at present; Painters, 1/9½ and Labourers, 1/5.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 15

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	"	0	18	0
Fine Copal	"	1	0	0
Pale Copal	"	1	2	0
Pale Opal Carriage	"	1	6	0
Best do. do.	"	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	"	1	0	0
Fine Copal Cabinet	"	1	4	0
Fine Copal Flatting	"	1	2	0
Hard Drying Oak	"	1	0	0
Fine Hard Drying Oak	"	1	1	6
Fine Copal Varnish	"	1	2	6
Pale do.	"	1	14	0
Best do.	"	1	4	6
Best Japan Gold Size	"	1	14	6
Best Black Japan	"	0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	38	10	0
Soil pipe	42	10	0
Compo pipe	47	10	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton } £18 0 0.

The Hall Mark AYGEE of Craftsmanship

AIR RAID DAMAGE REPAIRS

GLASS SUPPLIED or GLAZING

SHOP FRONTS AND PLATE GLASS REPLACEMENTS RECEIVE IMMEDIATE ATTENTION

AYGEE LTD.

England's Largest Glazing Contractors.

100 WESTMINSTER BRIDGE RD., S.E.1

Ring: Waterloo 6314 (6 lines)

THE SCOTTISH BUILDER

NEW BUILDINGS

COALBURN.—Plans prepared for dairy buildings and reconstruction of farm buildings at Birkhill, for which the architect is James Forsyth, Milton, Lesmahagow.

GOUROCK.—Plans being prepared for housing scheme at Inverkip-st., Greenock firm, for which the architect is Frank Petrie, Library-bldgs., Wallace-sq., Greenock.

GLASGOW.—Plans prepared for alterations and additions to properties at West Regent-st., for which the architects are Watson, Salmond & Gray, 111, Union-st., Glasgow.—Plans prepared for alterations and extensions for William Muir Stevenson, dairymen, for which the architect is John W. MacDonald, 8, Balmuidy-rd., Bishopbriggs.

RUTHERGLEN.—Plans prepared for dairy buildings, milkhouse and other premises at Biggar-rd., for which the architect is George Scott, 98, Biggar-rd., Cleland.

Change of Address.

The Brightside Foundry and Engineering Co., Ltd., announce that on July 24 they will move their London offices to larger premises at 57, Tufton-street, S.W.1. The telephone number, Abbey 3811, remains unchanged.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3½
24 oz. Clear or "R" quality	5
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ¼ in.	7½d.
Rough cast double rolled, ⅜ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Cast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
" 32 oz.	4	0
" Cast, ¼ in. thick	0	9½
" " ⅜ in. thick	1	0
" ½ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
" " " ⅜ in. thick	1	0
" " " ½ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅛ in. thick— To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass: ¼ in. thickness	2	0
⅜ in. "	3	0
½ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4¼ in. × 3⅛ in.	2	9	each nett
P.B. 2—5¼ in. × 5¼ in. × 3⅛ in.	2	6	"
P.B. 3—7¼ in. × 7¼ in. × 3⅛ in.	3	6	"
P.B. 32—7¼ in. × 7¼ in. × 3⅛ in.	3	6	"

Radiused Corner Bricks to match up with—

P.B. 2	4	6	each nett
P.B. 3	6	0	"
P.B. 32	6	0	"

THE RECONSTRUCTION OF SMOLENSK

By GEORGE HANNA.

I HAVE just had an opportunity of seeing some of the work that is going on in the Smolensk region. Here the process of liberation was spread over more than a year, so that the co-ordinated work could only begin quite recently.

In January of this year the regional authorities adopted a complete rebuilding plan for the whole area. Its realisation will take three or four years. Temporary measures include the provision of water, electricity, and living quarters for those fortunate enough to be left alive after the Germans passed, and for the builders who have come from the eastern districts to help.

Towns are not only to be reconstructed. They are being entirely replanned in accordance with the most modern ideas: wide tree-lined streets, spacious squares, and plenty of parks. A few figures will give the reader some idea of what the builders have to cope with. Twelve of the biggest towns in the region were reduced to heaps of rubble. All the buildings were burnt or blown up. The tramways, water mains and pumping stations all ceased to exist.

Another six big towns had 60 to 80 per cent. of their buildings razed to the ground. Over 2,000 villages, with their wooden cottages and farm buildings, fell victim to the Nazi incendiaries. Two hundred and thirty-six power stations were blown up; 49 of 52 State farms and 92 of 98 machine tractor stations were wrecked. These few figures convey the utter ruthlessness of the German policy of "terra deserta."

In the summer and autumn of 1943, while the farmers were busy repairing the farm buildings and tending their crops, the first stage of the work of restoration was completed and the children's education was provided for. During the 1943-44 school year, 2,278 schools were opened for 270,000 children.

Machine and tractor stations, dwelling-houses and farm buildings are being built to plan. Architects have produced several albums of designs for farmers' cottages and farm buildings. Typical standard designs have been produced for each region, so that local building materials can be used to the fullest possible extent.

The plan for 1944 allocates 340,000,000 roubles for the restoration of the Smolensk region. Over 60,000,000 roubles will be spent on rebuilding and extending industrial enterprises belonging to Republican and regional concerns; 44,000,000 roubles on local industries and industrial co-operatives; education, libraries and public health institutions get 72,000,000 roubles; roads, telephone and radio 20,000,000 roubles; trade and communal feeding 18,000,000 roubles; machine and tractor stations 16,000,000 roubles.

The sum allocated during 1944 for the reconstruction of the town of Smolensk is over 120,000,000 roubles. The money is being spent in accordance with the plan for reconstruction drawn up by the municipal authorities and confirmed by the regional committee. Thanks to this plan there is no anarchy in the rebuilding. The plan states exactly which buildings are to be reconstructed, extended or rebuilt, and exactly what materials will be available for this purpose during 1944.

Although Soviet builders worked the year round in pre-war days, this has not been possible under present circumstances. The huge number of highly skilled workers required to work the year round rebuilding the 18 large towns of the Smolensk region will obviously not be available while the war continues. Actual building work ceased for the winter, and the workers thus released were employed in transporting and preparing building materials, so that with the Spring work could start full speed ahead.

Another problem that was, to a considerable extent, solved during last winter was the training of men and women for the building trade. Special courses for carpenters, bricklayers, painters, plasterers and other tradesmen were held to bring the number of skilled and semi-skilled building workers in the Smolensk region up to nearly 40,000. About 25,000 unskilled labourers have been drawn into the work. During the summer they, too, will be given some training in building trades.

In addition to those employed as full-time building workers, all the people of Smolensk are helping with the rebuilding. The slogan is: "Everybody to work for a new and better Smolensk." Every district town has its building trust. In the forest regions that surround the town timber trusts are selecting and felling timber for the newly built sawmills that are providing the wood. The manufacture of bricks and tiles has already been organised on a sufficiently large scale to ensure regular supplies of these materials. With the exception of the girders and other heavy iron and steel work, everything is being made locally, so avoiding the delays that inevitably result where builders have to depend on a railway system that has its hands full supplying the front.

The regional plan co-ordinates rebuilding work for the whole region. Each department of the regional executive committee has its own detailed plan of action. The Department of Education, for example, is rebuilding 29 town schools, 119 rural schools, seven children's homes, six kindergartens and five teachers' training schools. The sum allotted for this work is 54,000,000 roubles, and materials are already available.

There is one more feature of Soviet reconstruction that deserves special mention: the system of "sheftsvo," or patronage. Regions which did not suffer the horrors of German occupation have adopted the western regions. A textile mill in Tashkent, let's say, "adopts" a textile mill in Smolensk. The "patron" mill undertakes to assist its "ward" to recover from the results of the Nazi occupation by sending machinery, skilled workers, money, food and clothing. Nearly every collective farm in the Central Asian Republics has adopted a farm in one of the western districts, and sends regular supplies of farm machinery, cattle and seed.

With every one of its people labouring ardently to remove all traces of German invasion, and helped by the entire U.S.S.R., Smolensk region will soon be the flourishing land it was before the war.

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FUTURE CONSTRUCTION

The Editor welcomes authentic information for this section from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JULY 11.

Plymouth T.C.—Erection of temporary public convenience at Honicknowle. City Architect, Compton Park House, Tavistock-rd., Plymouth.

JULY 12.

Morley E.C.—Alterations of playsheds into dining room at Pell-st. school. B.E.

JULY 13.

Chertsey U.D.C.—Erection of Civil Defence Store at central depot. W. V. Davies, E. and S.

Monmouthshire C.C.—Erection of prefabricated hut at Rogerstone School. C. L. Jones, County Hall, Newport. Dep. £1 1s.

Prestwich County Mental Hospital.—Demolition of house on hospital estate. A. R. Dowling, Clerk and Steward, County Mental Hospital, Prestwich, Manchester.

JULY 15.

Birkenhead T.C.—Conversion of premises at 2, Chetwynd-rd. into self-contained flats. B.E. and S.

JULY 17.

Hunts E.C.—Erection of school meals kitchen at Godmanchester. T. H. Longstaff, County S. and Architect, Walden House, Huntingdon.

Warrington T.C.—Renovations to six terrace houses at Cornwall-st. B.S.

JULY 18.

***Worcester T.C.**—Conversion of "Avenbury" into Maternity Home. City E., 22, Bridge-st. Dep., £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

JULY 11.

Stretford T.C.—Exterior painting of schools. E. Parker, B.S. Dep. £2 2s.

JULY 12.

Bristol T.C.—Painting, colouring, etc., at certain schools. Education Office, Cecil-rd. Dep. £1 1s.

Petersfield R.D.C.—Painting 33 houses. Building S., The Old College, Petersfield.

JULY 13.

Acton E.C.—Redecorations and repairs at various schools. B.E.

Leeds Estates Committee.—Painting, etc., certain bridges. City E.

West Riding C.C.—Renovations and painting work at schools at Ilkley, etc. C. Anderson, Div. Officer, Ed. Office, Otley.

JULY 14.

West Riding C.C.—Painting work at schools at Selby, etc. Div. Officer for Ed., Ed. Offices, Garforth, nr. Leeds.

JULY 15.

West Riding C.C.—Painting work at Rawmarsh schools. A. E. Hall, Div. Officer, 44, Moorgate-st., Rotherham.

JULY 17.

Leeds Library and Arts Committee.—Exterior and interior painting at Armley library and exterior of Headingley library. W. S. Cameron, City E.

Liverpool T.C.—Interior painting at St. John's Market. City E. and S.

JULY 24.

Rowley Regis E.C.—Painting works at two schools. E. Dept., Municipal-bldgs.

AUGUST 21.

***Southport C.B.**—Painting and decorating at Victoria baths and other premises. B.E. Dep. £1 1s.

ENGINEERING, IRON AND STEEL

JULY 15.

River Ouse (Yorks) Catchment Board.—Construction of bridge. A. W. Wood, Clerk of the Board, 7, Langcliffe-rd., Harrogate. Dep. £4 4s.

JULY 31.

Kidsgrove U.D.C.—Sinking 15-in. to 12-in. borehole. Herbert Lapworth and Partners, 25, Victoria-st., London, S.W.1. Dep. £2 2s.

ROAD, SEWERAGE AND WATER WORKS

JULY 17.

Nantyglo and Blaina U.D.C.—Reconditioning and surfacing of roads. E. and S. Dep. £2 2s.

†**Ploughley R.D.C.**—Supply, delivery and laying of about 1½ miles of 3-in. and 4-in. water mains, together with certain building work and ancillary items. Howard Humphreys & Sons, 7, Eldon-sq., Reading. Dep. £1 1s. Tenders by July 17.

JULY 18.

Knaresborough U.D.C.—Surface dressing. S.

JULY 19.

West Bromwich and Smethwick and Municipal Boroughs of Oldbury and Rowley Regis.—Concrete road and sewer works for advance preparation of housing sites. B.S., Town Hall, West Bromwich. Dep. £5 5s.

JULY 21.

Wellington (Salop) R.D.C.—Construction of approx. 1,230 lin. yds. of 2 in. and 1½ in. dia. asbestos-cement mains, together with small pumping station, etc. A. H. S. Waters, M.Inst.C.E., 25, Temple-row, Birmingham, 2. Dep. £3 3s.

JULY 22.

Manchester T.C.—Construction of roads and sewers for housing sites. City S. and E. Dep. £5 5s.

JULY 27.

Llanfyllin T.C.—Construction of water supply works. W. A. Evans, 38, Victoria-rd., Penarth, Glam., Consulting E. Dep. £5 5s.

JULY 31.

South-East Staffs Group.—Construction of road, sewer works, etc., for housing sites. M. E. Habershon, Superintending Officer, B.S. Office, Council House, Walsall. Dep. £3 3s.

PUBLIC APPOINTMENTS

JULY 17.

Luton T.C.—Temporary Junior Architectural Assistant. Applications to F. Oliver, B.E.

Blofield and Flegg R.D.C.—Architect and Clerk of Works. £450, plus £45 10s. bonus. L. McRoberts, C., Council Offices, Acle, nr. Norwich.

JULY 24.

***Sunderland E.C.**—Assistant Master for Building Section at Junior Technical school. Application forms from W. Thompson, D. of E., Ed. Offices, 15, John-st., Sunderland.

JULY 29.

London.—Appointment at The Polytechnic, Regent-st., W.1. (1) Full-time Senior Lecturer and Studio Master in Constructional Subjects; (2) Two Full-time Studio Masters and Lecturers in Architectural Subjects; (3) Part-time Lecturers (evenings) in Town and Country Planning Subjects and Studio Masters in Planning and Civic Design. Particulars and form of application from Director of Education, The Polytechnic, 309, Regent-st., W.1. (Stamped and addressed envelope required.)

AUGUST 10.

***Ministry of Town and Country Planning.**—Temporary Senior Technical Officer at London headquarters. Written applications, quoting E.A.950A, to Ministry of Labour and National Service, Room 432, Alexandra House, Kingsway, London, W.C.2.

GENERAL BUILDING WORK

Ashton-under-Lyne.—T.C. approved alterations to premises, for J. C. Carlson, Ltd. (Cotton), Weir Mill, Mossley.

Belper.—R.D.C. approved conversion of "Netherton," Holbrook, for Dr. Barnardo's Children's Home, for trustees.

Boldon (Durham).—U.D.C. to acquire land at Mill-la., Whitburn, for erection of 170 houses.

Bolton.—T.C. approved: Reconstruction of Wright's Arms garage, Belmont, for S. Smith, 634, Tonge Moor-rd.; office to works, for T. W. Pearson & Son.

Bootle.—T.C. approved reconstruction of 235, Markfield-rd., for North Western Estates Developments, Ltd., 17, Mill-la., Stanley, Liverpool 12, at £1,427.

Brierley Hill.—Members and Management of St. John Ambulance Brigade propose erection of gymnasium.

Brighouse.—T.C. approved: Additions for Meredith & Drew, Ltd., farm buildings, Field House Farm, Southowram, for Carter & Summerskill.

Coventry.—Society for Blind propose adaptation of premises for hostel.

Darlington.—T.C. to provide nursery at the Maternity Hospital, at £125.—Schemes approved for erection of sculleries at Rise Carr, Dodmire, Corporation-rd. and Kendrew-st. schools, for E.C.

Dawlish.—Committee of Coventry Hospital Fund, 3, Swanswell-ter., Coventry, acquired "Lanherne House" for adaptation for convalescent home.

Ealing.—Dodge & Reid, 72, High-st., Brentford, are architects for temporary nurses' quarters at Queen Victoria and War Memorial Hospital, Green-la., also for provision of therapy and massage department at Hanwell Hospital, Green-la.

Giggleswick (Settle).—Building Committee propose assembly hall.

Glusburn.—West Riding E.C. propose senior school on site to be acquired.

Jarrow-on-Tyne.—B.E. prepared plans for preparation of housing sites.

Jarrow-on-Tyne.—E.C. proposes improving sanitary arrangements at Grange school.

Llanfairfechan.—Board of Governors of St. Winnefred's school propose extensions. Plans by P. M. Padmore (A.), Whilome, Llanfairfechan.

Longbenton.—U.D.C. to acquire housing sites at Dudley, Burradon and Forest Hall.

Manchester.—T.C. approved alterations. A. E. McCutcheon, architect, 1180a, Chester-rd., Stretford; additions to works. A. A. G. Toone (A.), 37, Princess-st.

Middlesbrough.—Middlesbrough Co-op. Society propose erection of cold storage room at Marton-rd.

Newcastle-on-Tyne.—N.A.A.F.I. Club with restaurant, canteens, theatre, etc., to be provided at £10,000.

Nuneaton.—Board of Management of General Hospital, Manor Court-rd., propose extensions.

Oswestry.—T.C. propose Youth Centre.

Rochdale.—T.C. approved additions at Shawclough Mills, Shawclough-rd., for Shawclough Mills (1920), Ltd.

Sheffield.—T.C. approved rebuilding Central Picture House, The Moor, for Directors of Central Picture House (Sheffield), Ltd.

Warrington.—T.C. approved: Bus station for Transport Committee; hostel, Museum-st., for Catholic Girls, Warrington Catholic Aid and Rescue Society, Legh-st.; alterations to premises for Rigby & Son.

Wolverton.—U.D.C. propose adaptation of premises at Stoney Stratford, for clinic.

Worsley.—Lancashire E.C. propose additions at Junior Day Technical school.

Yelvertoft.—Building Committee propose erection of assembly hall.

BRITISH RESTAURANTS AND CANTEENS

Ashton-under-Lyne.—E.C. propose school canteen kitchen at Portland-st.

Billingham-on-Tees.—U.D.C. approved scheme by Durham C.C. for central kitchen, nr. Billingham station.

Bolton.—E.C. propose school kitchens at Shepherd Cross-st., and at Deane Church-la.

Brighouse.—E.C. propose adaptation of portion of Waring Green Youth Centre for school dining centre.

Calow.—Derbyshire E.C. propose canteen kitchen for C. of E. schools.

Durham.—County E.C. approved schemes for erection of 20 central kitchens and sculleries. Plans by County Architect, 34, Old Elvet, Durham.

Keighley.—E.C. propose cooking centre at Elms Field.

Mansfield.—E.C. propose canteen kitchens at Pleasley Hill and Bull Farm.

Newtown, Mont.—Montgomeryshire E.C. propose canteen kitchen.

North Riding.—E.C. propose provision of further school canteens and dining centres, at £5,370.

Oakengates.—U.D.C. seeking sanction of M.H. for B.R. at St. George's and Trench.

Rochdale.—T.C. approved canteen at Marland Mill, for Marland Spinning Co. (1920), Ltd.

Urmston.—U.D.C. approved canteen and lavatory for Simpson Ready Foods, Ltd.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Bromsgrove.—Erection of 'bus shelter at Forge Garage, Hagley, for R.D.C. C. E. Cox, S.: *Poulton & Davies, Belbroughton, nr. Stourbridge.

Deptford.—For repairs at 42-44, Ashmead-rd., for T.C.: *Greenaway & Son, 265a, Lordship-la., S.E.22, £995 (subject to M.H. approval).

Durham.—Conversion and repairs to outoffices at Tow Law Dan's Castle school, for County E.C.: *F. W. Goodyear & Son, Claypath, Durham, £396.

Ealing.—For alterations and additions for Paul's Bakers: *N. Green & Co., Ltd., New Broadway-bldgs., W.5.

Eccles.—Erection of nursery classrooms at Westwood Park school, for E.C. Tom Elce, B.E.: ‡Ernest Tonge & Sons, Ltd., 36, Station-rd., Swinton, Manchester, £1,470.

Liverpool.—For extensions to Nurses' Home, Fazakerley Sanatorium, for T.C.: *John Rimmer & Son, Ltd., Liverpool, £5,898.

¶London (Air Ministry).—The Directorate of Contracts has placed new contracts of £500 or over for the week ended July 1 as follows:—

Building work: W. Lacey (Hounslow), Ltd., Hounslow, Middx.; C. Jenner & Son, Ltd., Maidstone, Kent; and Ringmer Building Works, Ltd., Lewes, Sussex.

Erection of Structural Steelwork: Sinclairs Steel Erectors, Ltd., Manchester, 16.

Installation work: Beck & Co., Ltd., London, S.E.1.

Surfacing work: General Asphalt Co., Ltd., London, S.W.1; Bristowes Tarvia, Ltd., London, S.W.7.

Civil engineering work: H. Joyce & Sons, Ltd., Blackpool; Wm. Briggs & Sons, Ltd., Dundee; Howard Farrow, Ltd., London, N.W.11; Holland, Hannen & Cubitt, Ltd., London, S.W.1; J. Laing & Son, Ltd., London, N.W.7; M. J. Gleeson, Ltd., Cheam, Surrey; and Fitzpatrick & Son (Contractors), Ltd., London, E.3.

General maintenance work: W. Wigham & Son, Sunderland; James Blake, Ltd., Aberdeen; and Comben & Wakeling, Ltd., Harrow, Middx.

¶London (Ministry of Works).—Contracts placed by the M.O.W. during week-ending June 29.

Hampshire: Civil engineering, Downing, Rudman & Bent, Ltd., Old-rd., Chippenham, Wilts; building work, James Longley & Co., Ltd., Crawley, Sussex.

Hereford: Building work, W. H. Peake & Son, Barton Works, Hereford.

Herts: Building work, A. J. Maxfield & Son, Waltham Cross, Herts.

Northern Ireland: Building work, H. & J. Martin, Ltd., Ulster Building Works, Ormeau-rd., Belfast.

Northumberland: Building work, L. W. Evans, 18, Norfolk-st., Sunderland.

Wilts: Building work, M. J. Gleeson, Ltd., London-rd., Cheam, Surrey.

Worcs: Building work, Spicers (Builders), Ltd., Ombersley-rd., Worcester.

¶London (War Dept.).—Works contracts placed by War Dept., for week ended June 24:—

Renfrewshire: Concrete work roadwork and hutting (erection), J. T. Grey & Co., Giffnock, Renfrewshire.

Northumberland: Miscellaneous work, R. W. Bell & Co. (Builders), Ltd., Newcastle-upon-Tyne 4.

Yorks: Miscellaneous work, Lawson & Boddy, Darlington, Yorks.

Notts: Miscellaneous work, R. Hustwayte, Sherwood, Notts.

Radnorshire: Miscellaneous work, Asphalte & Public Works, Ltd., Hereford.

Oxfordshire: Heating work, Norris Warming Co., Ltd., London, W.C.1.

Kent: Miscellaneous work, Ward Barton & Co., Ltd., Whitstable, Kent; R. Corben & Son, Ltd., Maidstone, Kent; F. Parham, Ltd., Gillingham, Kent.

Dorset: Painting work, Fields, Ltd., Reading, Berks.

Newcastle-on-Tyne.—For improvements to premises for John Farnen, Ltd., general drapers: *Wilfrid Marshall, Back Eldon-st., Newcastle.

Pendlebury.—Erection of plant repair workshop and loading bay: *J. Gerrard & Sons, Ltd., Pendlebury-rd., Swinton, Manchester.

Preston.—Erection of prefabricated kitchen and boiler-house at Moor Park Open Air school, Preston, for C. B. J. Ernest Foster, Acting B.E. & S.:—

Mertees Construction Co., Ltd., Manchester	£2,972
J. C. Edge, Hoghton, nr. Preston ...	2,808
Exors. of R. Gregson, Preston	2,798
Geo. Hill & Sons (Preston), Ltd. Preston	2,729
J. Turner & Sons (Preston), Ltd., Preston	2,662
T. Croft & Sons, Ltd., Preston	2,649
*The Palatine Construction Co., Preston	2,300

Rugby.—External painting of 60 houses at Wolston and at Ryton-on-Dunsmore, for R.D.C. W. E. B. Bunker, S., 24, Warwick-st.: *W. Wright, Church Lawford, nr. Rugby, £264.

NEW COMPANIES

The particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery lane, W.C.2, from the documents available at the Companies Registry.

Timbagrips, Ltd. (387601). Regd. May 15. Stuart Works, Stirling-corner, Elstree, Herts. To acquire a licence to use certain inventions relating to wooden-framed structures, etc. Nom. cap.: £2,000.

B.G.B. (Builders), Ltd. (387603). Regd. May 11. 1, Quality-court, Chancery-ln., W.C.2. Nom. cap. £500. Dirs.: H. Baker, 38, Eve-rd., Isleworth, W. Golston, and B. V. Biffen.

E. H. Branland, Ltd. (387607). Regd. May 16. Bldrs., etc. Nom. cap.: £1,000. Dirs.: A. Astbury, 60, Ravenscliffe-ave., Bradford, and A. Ackroyd.

Dyer and Partners (Harrogate), Ltd. (387629). Regd. May 17. Bldrs., etc. Nom. cap.: £100. Dirs. to be appointed by subs., G. C. Harrison, 28, Scotland-rd., Buckhurst Hill, Essex (solr.), and J. E. Adams.

H. Sheffield (Builders), Ltd. (387634). Regd. May 17. 618, Lea Bridge-rd., E.10. Bldrs., etc. Nom. cap.: £1,000. Dir.: H. Sheffield, Denehurst, Bridge-ave., Upminster.

Northcotts Surfacing, Ltd. (387641). Regd. May 17. 4, The Plains, Totnes. Road contractors, etc. Nom. cap.: £5,000. Dirs.: W. G. Northcott, Denver House, Keysfield-rd., Paignton, and W. R. Northcott.

J. Grieves, Ltd. (387669). Regd. May 18. Plasterers, cementers, concreters, etc. Nom. cap.: £3,000. Permt. dirs.: J. Grieves and Mrs. D. E. Grieves, 25, Southfields-rd, South Shields.

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